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COTTON AND THE COTTON MARKET

COTTON AND THE COTTON MARKET

BY

W. HUSTACE HUBBARD

MEMBER OF THE FIRM OF HUBBARD BROTHERS AND COMPANY

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TO MY FATHER
S. T. HUBBARD
THIS BOOK IS
AFFECTIONATELY DEDICATED

PREFACE

One of the great natural resources of the United States is the annual cotton crop, which dates back almost to the start of the nation, the first crop on which we have statistics being that of 1790-91, when a yield was reported of 8,889 bales of 225 pounds each. The largest crop on record is that of 1911-12, when the production was 16,101,000 bales of about 500 pounds each (linters included). The actual growth of 1914-15 was still larger, but owing to the confusion incident to the outbreak of war in Europe, the cotton did not come into sight that season, so that the largest commercial crop is that of 1911-12. At any rate, the contrast with 1790-91 is sufficiently striking. The 1911 crop was estimated to be worth $869,690,000 (cotton seed included), whereas the value of the cotton exported that season was estimated at $563,543,000. Cotton has always been an important item in our international trade balance.

The methods of marketing cotton have grown up during the past half century, keeping pace with the development of modern means of rapid communication. The mechanism for moving cotton from the plantation to the mill is more highly organized than is the case with any other commodity, with the possible exception of the grain crops. A study of cotton marketing is interesting in itself and is also important in throwing a clear light upon the dealings on the great organized exchanges, transactions which are not clearly understood by many people and which are erroneously supposed to be largely speculative in character.

Cotton is not a perishable commodity. Indeed, though there may be some slight deterioration in color, some slight weakening of the fibres from long storage, cotton may be kept indefinitely in proper warehouses. There are well authenticated instances of cotton stored thirty years or more being brought out and sold in competition with the current year's crop. Questions of refrigeration or other special forms of storage or marketing will not be covered in this book.

A study of cotton and cotton marketing naturally divides itself into four parts. First, we must have a general knowledge of the problems of cotton cultivation in order that we may comprehend the reasons for certain methods in marketing. A study of cotton production is particularly important at the moment because of the serious problems raised by the boll weevil. The damage done by this insect recently has been much to the fore. Second, we must sketch in outline all the machinery used to market the bales. This will necessitate a study of the warehouses and compresses in the South, of all the various Southern merchants, and of the methods of doing a future contract business on the three large exchanges—New York, New Orleans and Liverpool. Third, we will study carefully the manner in which merchants use the future-contract system to protect themselves against market risks. The trade calls this use of the organized exchanges "hedging." Fourth, we shall devote a short time to the study of speculation in connection with cotton marketing.

Our work ends at the mill door. We have set ourselves the task of outlining the marketing of raw cotton. The manufacture of that cotton into cotton goods and the distribution of those goods are topics which are not within our province.

I am indebted to Prof. H. R. Wellman of the Tuck School at Dartmouth College for the suggestion that there was a place for such a book upon the growth and marketing of the American cotton crop. A period of enforced leisure gave me opportunity to undertake the work.

The United States Department of Agriculture has done excellent field work in cotton, and the results of its investigations are published in pamphlet form from time to time. I have made use of these documents, and a student desirous of the latest information, or of technical instruction, should most certainly communicate with the Department and obtain its recent publications.

Cotton statistics are available through publications of the Department of Agriculture, the Census Bureau and the annual reports of the cotton exchanges. It is a great convenience to have the statistics carefully compiled in one volume. I have made constant use of Shepperson's *Cotton Facts,* published by the Shepperson Company of New York. The book is issued annually and is used by all cotton people.

It is impossible for me to thank personally all the members of the cotton trade who have assisted me from time to time. In certain instances acknowledgment of information received is given in the text. I should like to express my appreciation of the help given me by Mr. James F. Maury, of New York, in connection with the old-time cotton trade; by Mr. Charles Dukinfield, former president of the Liverpool Cotton Association, in reading the manuscript on the Liverpool market; and by Mr. George M. Shutt, of New York, in reading manuscript and furnishing valuable suggestions.

W. H. H.

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PART I

COTTON PRODUCTION

COTTON AND THE COTTON MARKET

CHAPTER I

AMERICAN COTTON CROP

One of the difficulties in a work of this character is the necessity for the use of many words and trade terms, entirely unfamiliar to the outside reader. Definitions are always troublesome, and we leave most of them to be taken up in the narrative. But three terms are essential before we even start. First, we have the "boll weevil," the most destructive insect pest known in cotton production, and popularly known as "the weevil." This pest first appeared in Texas in 1892 and has since spread all over the belt, greatly modifying the methods of cultivation. Second, there is the term "grade," which is a method of determining the value of cotton by observation of the color, the bloom, and the amount of foreign substance appearing in a sample of cotton taken from the bale. Third, there is the term "staple," which is a method of determining the value of cotton by observation of the length and strength of the fibers. We shall later come to a more thorough explanation of all these terms, but a rough understanding of their meaning is needed at the outset.

The Cotton Belt.—It is often supposed that cotton can be raised only in a very warm country. It is true that hot summers of some duration, with late frost, are necessary for its full development, but cotton is really a temperate zone plant, and is found in every part of the world from 37° north of the equator to about the same south. I have raised cotton in my garden in Westchester County, New York, and had the bolls open on the plant. In fact, in the Revolution, cotton was raised in south Jersey and Pennsylvania, and the lint spun into yarn on the farm. In 1793 Eli Whitney invented the cotton gin, and thereafter, with the lint no longer picked out by hand, it was cheaper for the Jersey housewife to buy the cotton yarn made from southern cotton than to raise it herself. The frost date was too early for Jersey and Pennsylvania to raise cotton against the South when the cost of ginning was reduced. The southern states of this country are well adapted for the growth of cotton, and so far they have produced so great a proportion of the world crop that they have had a monopoly of the price, in so far as production controls price. In a later chapter we will consider the result of the weevil in connection with the cotton supremacy of the South. The northern line of cotton production crosses southern Virginia from the vicinity of Norfolk, runs down through the two Carolinas, as far up in the mountains as frost will permit cotton to be grown, along the northern boundary of Georgia and Alabama, up into the southwest corner of Tennessee, and so reaches the Mississippi River. West of the river, the line goes up into southeastern Missouri, then southwest across Arkansas, and so through the center of Oklahoma to the western edge of the cotton belt. This western line is not at all well defined, but runs down in irregular fashion to San Antonio, and thence to the Gulf at Brownsville on the Rio Grande. Generally speaking, the line is about one hundred miles west of Oklahoma City and Fort Worth, and not so far west of Austin and San Antonio. The tendency is to push west slowly, as more land comes under cultivation and the annual rainfall increases. The southern boundary is the Gulf of Mexico, except that there is usually a belt of swamp and marsh right along the shore, and cultivation does not get close to the beach except at scattered intervals. South Florida does not grow cotton, the line running across the northern half of the state to the Atlantic. Within these boundaries lies the "Solid South" of cotton, the old cotton belt, which has been producing the staple for the past hundred and thirty years.

Divisions of the Belt.—It is obvious that such a vast area must show many variations of soil, climate, and cotton, and such is the case, although this fact is little understood outside the cotton trade. The belt is divided into four sections: (1) the Atlantic States; (2) the Gulf States; (3) the Mississippi Valley; and (4) Texas and Oklahoma. Geographically the sections are indicated by their titles, but the Valley and the Gulf sections overlap each other and the state lines are not the boundaries.

The Atlantic States.—This section, often called "the Atlantic," is comprised of North Carolina, South Carolina, and Georgia. With North Carolina is included the small part of Virginia which produces cotton. Florida is sometimes put in the Atlantic, and sometimes placed in the Gulf section, but, at any rate, the Florida crop is unimportant. The upper portion of the Carolinas and Georgia is known as the *Piedmont,* and takes in more especially that part of the coastal plain close to the mountains. The Piedmont suffers more from frost than the lower lands of the Atlantic, but, on the other hand, the showers are more frequent in dry spells, because the proximity of the mountains tends to cool the atmosphere. The larger number of the southern cotton mills is to be found in the Piedmont. As a rule, the plant does not grow tall, and the cotton in this section is often called "Bumblebee" cotton to distinguish it from the higher plants elsewhere. The yield of these counties is satisfactory, and, since the weevil arrived, North Carolina, whose largest cotton county is in the Piedmont, has had a larger yield per acre than any other state. The farms are small, consequently the individual fields are not large. The ground is much broken with steep little hills and ravines, so that the fields are all terraced to prevent washing, and the cotton is planted in sweeping curves, the rows running around in line with the terraces. Ditching is carefully done to drain off the surface water after the heavy thunder showers.

Along the coastal plain from New Jersey south, there is an area of red clay stretching down from the hills to meet the sand of the coast. This red-clay belt is broken in places by other soils and by sand, but it can easily be traced all the way down on the train from New Jersey to south Georgia. The central part of South Carolina and Georgia has more clay than the Piedmont, and in this part of the two states, more especially Georgia, are found the so-called "Redlands." These are the most productive lands in the Atlantic, although the actual yield has recently been reduced by weevil damage. The fields are larger and there is less need for terracing than in the Piedmont. The cotton is planted in longer and straighter rows. Moreover, while all the Atlantic needs fertilizer, the red lands need less potash than the sand on the coast, or the lighter land in the hills. At the southernmost extremity of the red clay, in southwest Georgia, is produced the earliest cotton outside southwest Texas, a fact of importance in years of a small carry-over, or a carry-over of poor quality. This section in recent years has suffered severely from weevil, so that both the acreage and production were reduced.

Along the coast there is a stretch of sandy land, which runs back an irregular distance, sometimes for many miles, and sometimes for only a short way from the ocean. In southwest Georgia, the sand runs back a long distance from the beach before it meets the red clay. Sandy soil is not good cotton land, because it requires a great deal of moisture, but, in wet years like 1916, these sandy counties will do relatively better than the clay. To raise cotton with success in the sand, potash is needed in some volume, as, without it, the plant will not hold the fruit in the heat of midsummer, but wilts and sheds off the bolls. These sections suffered from the lack of high-grade fertilizer during the War. High winds near the coast in the picking season will blow the sand into the bales and produce many "sandies."

Sea Island.—The coast of the Carolinas and Georgia is irregular, with many indentations and many long sounds and bays running north and south. On the mainland and on these islands outside the sounds, in South Carolina and Georgia and Florida, is grown the "Sea Island" crop, made up of the longest staple cotton grown in the United States, rivaling Egyptian in the length, strength, and the silky character of the fibers. The weevil ruined this crop, the production falling from 122,000 bales in 1911, to only some 4,000 bales in 1920. The Department of Agriculture is introducing a new variety of early maturing Sea Island cotton in an attempt to get ahead of the weevil.

Upland Cotton.—The cultivation of cotton has been carried on in the Atlantic a greater number of years than elsewhere, and the efficiency of the farming is regarded as greater than in other sections. Exceptions prove every rule, but such is the general feeling of the trade. It is hoped that this knowledge of the art of cotton cultivation ultimately will prove of service in the fight on the weevil. The character of cotton produced in the Atlantic is called "Upland," and has a short length of fiber and is not particularly strong. The average length of staple in the Carolinas is from three quarters of an inch to an inch, and, while the average is somewhat longer in Georgia, the general character of the cotton is the same. In some of the weaker, sandy soils, the cotton produced has a very short staple and a fluffy appearance. This cotton wastes badly in spinning and will not command the same price as the regular upland type, which the Englishmen call "bodes" to distinguish it from the very short stuff. As an offset to this weak cotton, the western part of Georgia raises longer and stronger cotton than the usual upland, and parts of extreme southwest Georgia produce even better cotton, close to the Gulf variety.

Atlantic Staple Cotton.—In recent years experiments have been carried out with a view of raising long staple cotton on the stronger upland soil. The J. L. Coker Cotton Company, of Hartsville, S. C., has been successful in work along this line, and the Department of Agriculture also has been active. The hope is that long staple upland may be perfected to take the place, in a measure, of the Valley and Sea Island crops which have been so reduced by weevil. A variety known as the "Columbia" has attained a length of an inch and a quarter, when grown under favorable circumstances.

The Gulf States.—Next, west of the Atlantic, comes the Gulf Section, but here state boundaries are not the boundaries of the district. For both Mississippi and Louisiana are divided between the Gulf and the Valley sections; northeastern and southern Mississippi belong in the Gulf, while northwest Mississippi goes with the Valley. Northeastern Louisiana, next the River, belongs in the Valley, and the balance of the state in the Gulf. The extreme northern part of Alabama is quite like the Piedmont section of Georgia, the western edge of which it joins, with rolling hills, more or less steep ravines, small fields and terraces. As we go west, the country is more open, so that most of Alabama and Mississippi are without hills, with larger individual fields and somewhat larger farms. There is a range of low hills running irregularly across Mississippi from the Gulf, until the river is reached just below Memphis. A good deal of upland cotton, very like the Atlantic, is raised in these hills. In the Gulf the rows begin to run straight across the fields instead of running around with the terraces, and this increases the impression of the larger farms. The red clay runs over into Alabama, southeast of Montgomery, down the Atlantic Coast Line railroad to the Georgia line, and this section is a fine cotton country.

The coast of both Mississippi and Alabama is generally marshy and swampy, so that cultivation seldom reaches the actual beach. There is a section below Mobile, where the cotton fields come very close to the shore. The staple of this cotton is short, unlike the Sea Island, and there is much trouble with "sandy" bales, since the white sea sand gets blown into the bolls, and, being white, is hard to detect except by touch. I once saw a lot of 500 bales of this coast cotton, all of which was full of sand, and yet except by touch the sand could not be discovered, for one could not see it.

Gulf Cotton.—The length of staple in the Gulf section runs from an inch to an inch and an eighth, and the strength is greater than in that of the Atlantic. This is due in part to the heavier soil, which is enriched by the annual overflow of the rivers, and in part to the more humid climate. A sharp distinction is drawn between the upland cotton grown in the hills of Mississippi and Alabama, and the usual Gulf cotton. The jungle of vegetation growing in the "bottoms" through which the creeks and rivers run has long been called a "canebrake." You will find that many merchants advertise on their letter-heads, that they deal in "canebrake cotton," a trade term originating in the old word canebrake, and indicating that the cotton was raised in the bottoms, and is, therefore, the usual Gulf type.

The Gulf states have always been large cotton producers and, prior to the advent of the weevil, Alabama and Mississippi ranked next to Texas and Georgia, with South Carolina just behind them, and, in some years, running a little ahead. The weevil entered Mississippi in 1907, and became destructive in Alabama during 1910, so that now the two states rank below South Carolina. It is probable the weevil damage in the Atlantic will once more reverse the order. The damage was so great in Alabama from 1912 on as to prevent any large increase in acreage, and finally, after the very bad season of 1916, there was an actual sharp decrease in the section below Montgomery. The weevil damage was enormous in those counties in 1916, and farmers turned to soya beans, peanuts, and other oil-bearing products, as the War had brought a demand for all sorts of oil, and these crops commanded a good price and were immune from the weevil. After the Armistice, the price of oils declined, and much of the land went back to cotton. A restoration of the large cotton yield of both Mississippi and Alabama depends upon the success of weevil control, the more so that the very numerous wooded stretches assist the weevil in hibernating.

The Mississippi Valley.—This section takes in northwestern Mississippi, from the river back to the hills, which run off steadily to the southeast, so that, by the time Vicksburg is reached, they are far from the Mississippi River. All eastern Arkansas, those counties in Missouri and Tennessee which raise cotton, and northeastern Louisiana, across from Vicksburg, are included in the Valley. The overflow of the Mississippi, and of all the creeks, rivers and bayous tributary to it, has enriched the soil, so that the finest cotton, outside Sea Island, is produced in this section. The smooth silky staple of the Valley will run as long as an inch and three quarters, and the breaking strength is unexcelled. Even the shorter cotton is an inch and a sixteenth in length of staple.

The Delta.—There is a subdivision of the Valley known as the "Delta," from the delta of the Yazoo River, which empties into the Mississippi at Vicksburg. The territory now included in the Delta is much larger than the watershed of the Yazoo, as the term now means northwestern Mississippi from Vicksburg to Memphis, together with the river counties of Louisiana and Arkansas on the opposite bank. Delta cotton has always been well-known and, before the weevil, the Memphis market every year had a good supply of extra staple, strong, silky cotton, running in length up to, and sometimes over, an inch and five eighths. My first season was spent in Memphis in the days before the weevil, and at that time a shipment of twenty-five or even fifty bales of Delta cotton, an inch and five eighths in length, was not an uncommon occurrence, while one could find on factors' tables so-called "crop lots," every bale of which was very long, silky, staple. This staple crop was a valuable complement to the Sea Island, and much of the extra long cotton used in this country came from the Memphis market and was raised in the Delta. The weevil ruined this crop, as has been the case with Sea Island, although the premium has been so very high that long staple cotton is still raised on many plantations south of Memphis, by dint of persistent and hard work with the weevil. The extension of cotton raising to California and Arizona is due in part to the reduction of the Delta staple crop by weevil. In 1919, a friend in Memphis engaged in shipping extra staples showed me in his cotton room three samples, one of a Sea Island bale, one of a particularly fine Delta bale, and one of an American-Egyptian bale from California. It was almost impossible to tell the Delta bale from the Sea Island, but the California bale was quite distinctive. The little exhibition was interesting as showing the character of Delta cotton at its best, and in contrasting the two old-fashioned staple bales with the new growth from the Far West.

In addition to this extra staple crop, the Delta has always been remarkable for the richness of its alluvial soil, the size of the yield, and the height and vigor of the cotton plants. Photographs of planters on horse or mule back, in the midst of a cotton field, with the animal almost hidden in the luxuriant foliage, can be had in Memphis or in any of the River towns. There is one old-time photograph, beloved of the trade, which can be found in many a cotton office throughout the belt. The view was taken near Rosedale, Mississippi, and shows pickers in the field well-nigh hidden by the tall, luxuriant plants, from the limbs of which a large crop already hangs from the open bolls. For years the river overflowed miles of this land every spring, so that the land became wonderfully fertile. In later years, until the levee system was perfected, occasional overflows due to breaks in the levee continued to do much damage every few years. In the past twenty years there has not been a bad "break" in the main Delta levee, although the flood of 1922 threatened in many places to burst through. These levees are not always built upon the normal bank of the river, but more often some miles back. This in part is done deliberately, so that in bad years the water may have more room, and in part is due to building around an old crevasse instead of across the opening. Outside the levees good cotton crops can be raised, always provided the late rise, called "the June rise," does not overflow the banks of the main river. This "overflow" land is very rich, but the gamble of the June rise is considerable.

Trade Terms.—The cotton grown in the "benders" of the Mississippi was long considered the most valuable, and so we have the term "benders," to indicate the heaviest character of cotton. Then the crop of the rivers tributary to the Mississippi was thought to be very fine, and we have the term "rivers" to indicate extra strong, silky cotton, although it is not quite up to the bender type. Finally, we have the cotton which is grown along the banks of the smaller streams, where the soil is not quite so rich. This cotton is called ''creeks.'' It used to be customary to call the very short ''Peterkin'' or ''Petes,'' after a certain variety of early maturing short cotton. Since the necessity of early cotton has become widespread because of the weevil, these terms have gone more or less out of use. The shorter, early maturing cotton has become more prevalent in the Delta and Valley than was formerly the case.

Delta and Valley cottons have always been in demand and have always commanded a premium, because they are so strong that the spinning waste is small, and because the finer staple is soft and silky, easily adaptable to the manufacture of high count yarns for fancy goods, and also to the manufacture of the finest counts of cotton thread. The shorter lengths are easily sold in Manchester, where the fine spinning qualities are well recognized. At one time there was a custom in the Liverpool market of selling lots in transit on description, before the samples arrived, and using the point of origin as the description. ''Orleans'' and ''Memphis'' marks always commanded a premium, because the cotton was supposed to come from the Valley and to be superior in staple. This practice has been modified of late years, partly because cotton was shipped into Memphis and then out under a Memphis lading, when it really did not come from the Valley, and partly because the weevil has reduced the average Valley staple.

Large Fields and Plantations.—In Mississippi, the fields are much larger, and many plantations are five hundred acres or more. The rows of cotton run straight across, as the necessity for terracing has disappeared. The largest plantation in the world is in the Delta, and there is no section of the belt with plantations anywhere approximating some of the Mississippi places, except extreme southwest Texas. Arkansas also has large farms, although there are none so large as the very big plantations of Mississippi. In both states are many clumps of woods, and canebrakes are along all the bottoms, affording the weevil shelter for winter hibernation, while the climate is naturally warm and moist. The result is that the weevil has been very prevalent and destructive throughout the Valley. North of a certain line the weevil has always been held in check by the colder climate, and, for this reason, he was for years only moderately destructive in the North Delta and in Arkansas. Recently, however, there is reason to suppose he is becoming acclimated, and weevil damage in these sections has been severe the past few seasons.

Texas and Oklahoma.—At one time this was referred to as "the West," or the "Western Belt," but these terms are less often used nowadays, because of the new cotton region in California and Arizona. The section is well described, simply by the names of the two states, although extreme west Arkansas really belongs with Oklahoma, and a small slice of northwestern Louisiana should go with east Texas, which it closely resembles. The general characteristics of Texas and Oklahoma are a rich alluvial soil belt, with stretches of poorer land on the outskirts, but everywhere a rolling country like the western prairies, of which, indeed, the two states are the prolongation. This rolling country is a striking feature of the landscape, impossible to overlook, and most impressive at first sight. There is a sense of distance, as if, on the top of the next rise to be seen from the car window, the land would stretch on for a vast space. It is the same feeling one has when riding behind the sand dunes on the seashore, the misty impression that, from the top of the dunes, the ocean will stretch away to the horizon. This sense of great distance is correct, for nowhere in the belt are the individual fields as large as in Texas and Oklahoma. The straight rows of cotton stretch away from the railroad until they seem to come together on top of the distant swell of land.

Character of Cotton.—The cotton raised in the two states must, of necessity, vary a great deal, for Texas and Oklahoma cover a great area, and there is much variation in soil. There is, however, a distinct character of cotton known in the trade as "Texas" or "Oklahoma," which has a staple longer and stronger than the Atlantic, but not so good as the Valley. Texas cotton most closely resembles the Gulf variety. The English spinner is very fond of this cotton, and the number of export firms is larger in Texas and Oklahoma than elsewhere in the belt. In part, this is due to the character of the cotton, and in part to the fact that export freight rates are comparatively cheaper than the rates to distant New England, whether all rail or coastwise. The larger portion of the Texas and Oklahoma crop in normal times "goes export" from the Gulf ports—Houston, Galveston, Texas City and Port Arthur.

Texas.—Every schoolboy has heard that in size Texas equals France, and, in such a state, it is obvious we must have much variation of soil, climate and crops. So far as cotton goes, we can at once dismiss extreme West Texas, where the principal "crops" are mesquite, sagebrush, and cattle. If you leave El Paso via the Texas and Pacific you spend all night crossing this semidesert, and, early next morning, you come to Big Spring, which is about the farthest west you will find cotton. Having thus eliminated a vast area from the western half of the state, let us look at the balance. In a cotton sense, Texas is divided into "West," "Central" and "East" one way, and "North, "Central" and "South" the other. The general eastern boundary of West Texas is the line of the Santa Fé railroad from the Red River to Fort Worth, and the line of the "Katy" (Missouri, Kansas and Texas) from Fort Worth to San Antonio. The western line wanders back and forth down the state from Wichita Falls to San Antonio. The tendency is to push out slowly into the desert country, but the semiarid character of the climate makes the cultivated areas rather scattered. There is a cotton section down the Wichita Valley railroad from Wichita Falls to Abilene, another section out on the Texas and Pacific through Sweetwater, Colorado and Big Spring, still another section around Brownwood, Marble Falls, and the country west of Austin, and finally, a small area of cotton may be found out on the Southern Pacific a short distance to the west of San Antonio.

There is a cotton-growing section in extreme Southwest Texas down the Rio Grande River to Brownsville, but this is usually included in South Texas, as the cultivation of cotton runs back from Brownsville along the railroad to Corpus Christi. West Texas has a productive soil and needs no fertilizer, but the land is close to the desert, is always semiarid in climate, and the droughts are frequently devastating. I was once told in Fort Worth by a commercial traveler: ''There is no use going west this fall, there is nothing out there but scorpions and dust.'' That was one of the ''dry years,'' and his statement was hardly an exaggeration, although to-day it would be quite incorrect, since oil has proved a wonderful panacea for drought, and the Ranger fields are between Abilene and Fort Worth on the Texas and Pacific. The trade looks upon the West Texas cotton crop as an annual gamble, either a good crop or nothing. The droughts have had one advantage—they have kept the weevil down. The acreage is usually increased each spring in West Texas, if the subsoil moisture makes cotton planting at all possible.

Central Texas.—This is the most productive section of the state and here are located the famous ''black lands,'' about as fertile soil as exists. Ellis County, in a good year, is the largest cotton county in the south, and her neighbors, Hill, McLennan, Bell, and Williamson, are not far behind. These black lands hold water like a sponge and I have been across them in September when it had not rained since June, and yet the cotton was still alive, and had something on the plant, even if the crop was a failure. The wonder was that anything at all had been produced with only an occasional light shower through three months of summer heat. These lands have never been thought to need fertilizer, but there has recently been some discussion as to whether the staple was not weaker, indicating the soil needed refreshment.

South Texas.—South Texas begins at the Colorado River, on which Austin is located, and runs down to the Gulf. This part of the state, including the Brownsville section, produces the earliest cotton in the belt, new bales coming into the Houston market in June. South Texas, like West Texas, is apt to be dry, and there is a good deal of the same semiarid climate and characteristics. The weevil has been in this crop for years. It originally crossed the Rio Grande near Brownsville in 1892, and the damage is always large and destruction is sometimes complete. The mild climate prevents any winterkill.

North Texas.—This comprises the counties north of Fort Worth and Dallas up to the Red River, the boundary of Oklahoma. The soil is black and almost as rich as Central Texas, while, in the dry years, there is more rain, owing to the thunder showers which come over from Oklahoma and which have not the strength to reach down to Central Texas. This is also a grain country, and when you ride up the Santa Fé from Fort Worth to Gainesville, you will find grain elevators and cotton gins in the same town. In 1915, with high grain and cheap cotton, it was remarkable how much grain had been planted, often drilled in between the old cotton stalks, showing plainly the shift in crops.

East Texas.—This is the small section close to the

Louisiana border. The northern line is not well defined, because the Paris section is classed with North Texas, owing to similarity in soil and cotton. Broadly speaking, East Texas, then, is south of Marshall, Palestine and Jacksonville. Parts of this territory are sandy, and some short cotton is produced. East Texas is not as important an area as the rest of the state, although the Trinity River bottoms are well-known, both for good cotton, and, in wet seasons, for weevil as well.

Oklahoma.—This, like Texas, consists of large fields, rolling country, much the same soil, and much the same character of cotton. Cotton growing is confined to South-central, South, and part of West Oklahoma, as the eastern part of the state is a coal region, the part north of Guthrie does not produce cotton, and extreme western Oklahoma is both too cold and too dry for cotton. The western line of cotton production is about one hundred and fifty miles from Oklahoma City, but varies with the season like West Texas. Like Texas, Oklahoma suffers from drought, but not to the same extent, since the cold air from the Rockies, striking the heated air of the state, produces many thunder showers. It is better than an equal chance that, if the morning temperature of Denver is twenty degrees or more under the morning temperature of Oklahoma City, there will be rain in the state inside of thirty-six hours.

These showers splash over into North Texas, but, in times of drought, it is only when the atmospheric disturbance is strong enough to send them below Dallas that the dry spell is broken in Central Texas. Then they will get down so far that they finally draw in moisture from the Gulf.

The New Cotton Region.—We have reached the limit of the old "cotton belt." Inside that belt there will be some increase in acreage as cultivation becomes more intensive and profitable, but the expansion in cotton growing is over, when we think in square miles and not in acres. There is, however, an entirely new cotton-growing region, which has great possibilities in the line of acreage, provided only that the water supply be assured. This is in the extreme southwest—California and Arizona. Cotton cultivation began in the Imperial Valley, partly in California and partly in Mexico, some fifteen years ago. At first the experiment was not very successful, owing to lack of experience in raising cotton under irrigation, but the United States Department of Agriculture devoted time and effort to the problem, and also experimented with the breeding of so-called ''Pima'' or ''American Egyptian'' long fiber cotton as well as with short cotton. This Pima cotton is grown in the Salt River Valley in Arizona and also in California. The production of this cotton received a great impetus from the combination of very high prices during the war years, and also the expansion in demand due to the growth of the tire industry. The Pima cotton has a long fiber, and many bales are silky, but the fine goods people prefer Delta, Sea Island or real Egyptian. Presumably the Department will overcome the objection of manufacturers to this Pima cotton, for they are still at work upon the development of what is, after all, a new variety of cotton. Meantime, the cotton is entirely suitable for tire yarns, and it has been stated that two of the largest tire-manufacturing companies proposed to raise their own cotton either in Arizona or California.

The California crop in 1910 was 5,986 bales; in 1914 it was 49,835 bales; in 1920, 77,892, and in 1921, 34,809. The severe drop in the price of long staple cotton caused a sharp decline in the acreage in both California and Arizona in 1921, but, unless there are rapid and satisfactory changes in present methods of weevil control, the trade are inclined to expect the future of the long staple crop of this country will be found in the Far West. If the weevil control does succeed, then the Delta and Sea Island crops may regain their lost supremacy, but, even so, the new cotton region of the southwest will be an ever-increasing factor in the long staple market.

New Mexico.—Cotton has been tried in the lower part of New Mexico in the Elephant Butte Dam project, but in some manner, both the weevil and the pink boll worm appeared, so that the state has been quarantined. Cotton cultivation had also spread over from West Texas into New Mexico around Roswell, but seed shipped thence to Central Texas has been proved infected with pink boll worm, so that cotton production has been stopped there also. We may not hear of New Mexico as a cotton producer for several years, but, in the future, it is possible she will join the ranks of the cotton states of the Far West.

CHAPTER II

COTTON CULTIVATION

General Remarks.—We must have a general knowledge of the conditions surrounding the raising of the cotton crop, that we may understand many of the problems of marketing that crop. It is not intended that this chapter shall be a scientific treatise upon cotton raising, but merely a general survey of the conditions essential to the production of a good cotton crop. We shall also confine ourselves entirely to the old cotton belt, since cotton under irrigation presents an entirely different set of problems. Those readers who are interested in a scientific study of cotton growing should write the Department of Agriculture in Washington.

Cotton Acreage.—In the United States the cotton plant is an annual and is planted fresh every year. There is a discussion every spring about the acreage the coming season, for there is a variation in the amount of land under cotton each year and sometimes the variation is considerable. If we look back over the past forty years, we shall find a steady increase in the consumption of cotton, and a steady increase in the amount of cotton produced, so that the acreage also has increased. We have had sharp reductions in the acreage for a single season due to various reasons, and each year there is a discussion in the southern press as to how much land should go under cotton. As the months go on, there are many private estimates of acreage, and the Department of Agriculture issues in July with their statement of the condition of the crop as of June 25 an official estimate of the cotton acreage. These are the official figures and are accepted by the trade as the basis on which to figure the crop for the coming season. The Department calls them "preliminary" and always corrects them the following June.

Cotton is the cash crop of the South and can be more profitably raised than any other crop. For years the South was a "one-crop country," a statement you will often find used in the newspapers of to-day, although, as a matter of fact, the South does now raise a fair proportion of her food and feed at home. Exactly how much the South should produce for home consumption depends entirely upon the economic situation. There is a point at which it is cheaper to buy than to produce, and a certain amount of their supplies the South will always purchase. The cotton is cash, and the amount received for the cotton will often recompense the farmer for his outside purchases to better advantage than if he had used the land to grow food or feed instead of cotton. There is an agitation each year based on the old one-crop theory, but the trade pay little or no attention to editorials and speeches on the subject, for they know from past experience that it is the price of cotton, the price of supplies, the supply of labor, and other economic facts, which in the end determine the acreage. The southern farmer and merchant know this also, but they enjoy the annual discussion which they feel develops the facts.

Acreage and Price.—The price received for the preceding year's crop is an important factor, since, other things being equal, a high price one year means an increase in acreage the next. The price of food and feed may offset the high price for cotton and prevent any increase in acreage. The planter has learned the wisdom of crop rotation to preserve the fertility of his soil, and he now grows a certain proportion of his supplies at home in any event. But when feed and food are high in price, it may be that he will find it cheaper to raise them than to buy them. In such case the high cotton price will not bring an increase in the cotton acreage. The war years were good illustrations of this point, for, despite the extraordinary cotton price, the South never raised as much "hog and hominy" as in those years.[1]

Acreage, Labor and Farm Animals.—There was a steady fall in the supply of farm labor in the South from 1915 on, and this fact kept down the acreage, because cotton is a crop requiring much cultivation, so that the planter dislikes to overcrop himself. He will take a chance at attractive prices and plant all he can possibly cultivate in good weather, but that always means increased abandonment of acreage in case there is any great amount of rain. Further than that he will not go, so that a shortage of labor will prevent an increase of acreage despite a high price. The labor question, while particularly acute in recent years, is always present in the South. Construction work on the railroads, levees, or roads, and an increase in the demand for unskilled labor for industry, will decrease the supply of farm labor. The negro likes cotton, which he knows as well as himself or his mule, but he likes short hours and high wages also, and it is hard to hold him on the farm when he can get them elsewhere. The labor question has increased in importance, now that to the ordinary cares of cultivation is added the matter of weevil control.

Closely connected with the labor question is the supply of farm animals. There must be mules or cotton cannot be raised, and every year the market letters and trade journals have much to say about the supply and the price of mules. The importance of the mule question may be seen from the fact that the farm is often sized up on the basis of "a one-mule farm," or a "two-plow property." We had the usual war dislocation in this quarter also, from which the South is just beginning to recover. After the Allies had scoured the South and West for mules and horses in 1914, 1915, and 1916, animals were high in price and difficult to secure at any price.

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[1] An interesting attempt to reduce to a formula the amount of food raised at home may be found in "Family and Farm Supplies on the Cotton Farm," C. L. Goodrich, U. S. Dept. Agriculture, Bulletin 1015.

Acreage and Fertilizer.—It has often been said that the lack of commercial fertilizer would reduce the cotton acreage, but the war years seem to show that this is not correct. From 1915 on the lack of potash made high-grade fertilizer very scarce, and all fertilizer was high in price. Yet there seemed to be little effect upon the acreage, although it is possible some sandy land went uncultivated, because the planter knew his chances for a crop without potash were small. As to what influence the lack of fertilizer had upon that is another question.

Acreage and Finances.—When the amount of cotton carried over in the South by the farmer is large, then the acreage may be a good deal reduced. The southern farmer has become quite independent to the advantage of all, but, like every business man, he requires a certain amount of financing each spring. When he has cotton on hand from the last crop, he is more or less crippled at the time of planting the next year. He needs to borrow money as usual, but he is loath to borrow as freely when he still has unpaid loans. The bank also is unwilling to extend credit to the usual extent, when they still have unliquidated paper. Therefore, in such cases, the cotton acreage is reduced simply because the low price and the unliquidated loans of the preceding year prevent financing on the normal scale. The spring of 1921 affords an excellent illustration of such a situation. A large amount of cotton was carried over unsold, prices had been sharply reduced, a severe financial stringency had taken place in the winter of 1920-1921, and the credit situation in the spring was strained. The result was a very sharp reduction in the acreage, originally estimated by the Department at almost 30 per cent from the 1920 figures, although subsequently these figures were modified.

Acreage Summary.—The remarkable reduction in acreage in the spring of 1921 has led to discussion of the maximum cotton acreage. Have we seen the largest acreage under cotton? Are the shortage of labor and the weevil to prevent any increase beyond the maximum figures reached in 1913 of 37,458,000 acres? These are questions which time alone will answer. We can say, however, that the weevil has brought sharp reduction in acreage in each state as he appeared, and that this acreage has subsequently been largely regained. If weevil control is successful, then we will have a gradual return to a normal acreage, that is, to an acreage which increases slowly with the demand for cotton. The cotton acreage in the old cotton belt can still be expanded within the territorial limits of the states, and that expansion will take place when the weevil is controlled, and when the demand from the world for cotton makes such increase in acreage necessary. If the weevil is not controlled, then the answer to the question may be very different.

Crop—*Winter Preparation.*—The actual planting of cotton takes place in the spring, but, to obtain the best results, a good deal of farm work must be carried on in the fall and winter. As early as possible the old cotton stalks should be cut down, removed from the fields, and burned, as a primary method of weevil control. The weevil hibernate over the winter, and the removal of the old stalks leaves them one refuge the less. This burning of stalks is recommended by the Department of Agriculture, but is too often neglected, because it may be late in the winter before the old cotton is all picked, and because, after the season's work is over, there is a natural slackening of effort. The burning of the stalks is of great importance, and it is probable public opinion will force the lazy or indifferent planter to destroy his old stalks, so that his carelessness will not injure others.

Winter Plowing.—After the stalks are removed, the land should be thoroughly plowed and softened for the winter rains. Not only will this conserve the moisture in those sections where long dry spells are to be feared, but it will also refresh the land. Moreover, this winter plowing will expose to the elements many insect pests which winter in the soil, and whose larvae (worm stage) and pupae (resting stage) are thus destroyed by being turned out into the air and exposed to rain, snow, and frost. Bollworm, cutworm, and grasshoppers are all reduced in number by winter plowing.[2] The damage from fungus growth, such as pink boll rot, is also reduced in this manner. In the West, this fall or winter plowing is of even greater importance, because of a disease known as Texas root rot, which is most destructive and which is best fought by deep fall plowing and a thorough aëration of the soil.[3]

Season in the Ground.—The question of winter rains and snows, or, as it is called, "the season in the ground," is of importance all over the belt. Where the ground has been thoroughly plowed and made ready, this winter moisture is of great benefit. In Texas and Oklahoma, especially Texas, whose black lands hold water so well, this winter moisture is of the utmost importance, and may prove the salvation of the crop in case of a spring drought. In 1911, for example, good winter rains carried the Texas crop successfully through a spring drought, which was not broken until July. The season in the ground is a subject of interest every year and may become a market factor of prime importance. The Weather Bureau publishes in the early spring a detailed statement of winter rainfall by stations in Texas and Oklahoma, so that every one can know just what the winter rainfall has been. This is a preliminary to the detailed report from the same stations issued daily through the growing season. There have been several bull markets, which had their origin in the lack of a season in the ground in Texas, notably the market of the first "Scales Year," 1909–1910.

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[2] U. S. Dept. of Agriculture, Farmers' Bulletin 890.
[3] Farmers' Bulletin 1187.

While we must admit the importance of a season in the ground, we must not be carried away with the idea, for, after all, the cotton crop is produced in the summer and not in the winter. The season in the ground will not alone make a crop, and the lack of winter moisture will not alone ruin a crop. It is possible to raise a large crop of cotton in Texas and Oklahoma without winter rains; it is possible to raise a large crop with winter rains and a long-continued spring drought; but it is not possible to raise a large crop without winter rains and with a spring and early summer drought. The subsoil moisture is exhausted and there is no reservoir on which the tap root can draw to keep the plant vigorous until the rains come. So we must regard the season in the ground as a most valuable asset for the crop to possess, but not as a factor which is absolutely essential to a large yield. If we have good spring and summer rains, the crop will survive the lack of subsoil moisture and will produce a good yield without a season in ground.

Winter and Weevil.—The weevil lives over the winter in fence corners, standing timber, rubbish, uncut cotton stalks, and anything else, which will give shelter. Cold alone does not actually destroy weevil unless long continued, for weevil have been known to survive temperatures of 15° above zero Fahrenheit. It used to be said that weevil could be frozen in cakes of artificial ice and survive. Careful observation has shown that, in the open, weevil can be winterkilled, and that the number of weevil is always less after a severe winter. Temperatures approaching zero

Fahrenheit will kill weevil, especially if followed by snow or freezing rains. This is more particularly true where the means of shelter have been reduced by the burning of old stalks and rubbish from the past summer. In any event weevil will survive any winter in old fence posts, stumps, timber, and such shelter as is always available in wooded localities, but the severe winter does reduce the number. The South is far less tropical than many northerners believe, and there is always one cold wave in any winter, which will carry temperatures near zero as far down as Memphis, Birmingham, and Atlanta. A severe winter like 1917–1918, or 1919–1920, will have several such severe cold spells, sometimes extending freezing temperatures all the way down to the Gulf. In such a season there will be weeks of cold weather with snow and ice, freezing rains, and thaws, all of which reduce the weevil the following spring. In 1917–1918, the temperature went as low as 13° below zero at Memphis—a record—and the following summer the weevil damage was the smallest in several years. Before the summer drought set in to further reduce the weevil that year, it was remarked all over the belt that the number of weevil coming out of hibernation was unusually small. The ideal weather is to have a mild spell early so that the winter plowing can be well done, and then to have many severe cold waves with as much rain and snow, and thawing and freezing as possible. After such a winter, the soil is in good condition and the weevil are reduced in number, so that the crop has two substantial advantages at the outset.

Preparations for Planting.—The actual preparation of the soil for the new crop begins in extreme South Texas in January, and moves slowly up north with the spring. After the first spring plowing, the land should lie out for a time, if possible; the early plowing is done as deep as possible to bring up the subsoil and change the land into which the seed will fall. Just prior to 1914 a lot of experimenting was done with powder and dynamite to bring up the subsurface. It is now thought unwise to do much of this sort of thing just before planting, for the soil is full of moisture from the winter, and there is not time for that thorough aëration of the land, which is the great advantage of deep plowing. As there is seldom opportunity for aëration in the spring, it is better to do the changing of the soil in the winter or fall plowing. When winter work is entirely lacking, then spring work is of the greater importance. Sometimes neither winter nor spring work is done, or is so badly done as to be valueless. In that case the crop starts with a handicap from which it is quite likely not to recover. When the stalk cutter, the plow and the planter are to be seen in the same field in the spring, the crop lacks preparation to an extent which can easily prove fatal. The war crops all suffered from a lack of either winter or proper spring preparation, due to the increasing scarcity of labor.

Planting.—Aside from Southwest Texas, which is too early to be considered with the balance of the belt, planting begins along the Gulf about March 25, and extends north into the central portion of the belt between April 10 and May 1, reaching the northern border between April 20 and May 15. These are normal dates, but cotton can be planted somewhat earlier in favorable years, and must be planted later in unfavorable years. Much delay beyond these dates is now dangerous, however, because of the weevil. Spring frosts are not infrequent, sometimes doing considerable damage, so replanting is necessary and the crop is badly delayed. The best example of damage done by a spring frost is the 1910 crop, which was caught by a severe frost late in April and so badly injured that widespread replanting was necessary. The crop never recovered from the delay. A spring frost will often cause a flutter in the market, but the question of how much the crop is delayed is the important factor.

Spring Rains.—A rain on which to plant, is always useful, and may be essential in the West, if the winter has been dry. In recent years the Atlantic has suffered so much from rains, that one almost forgets moisture is always helpful for germination. On the other hand, too much rain right after planting will cause rotting seed and poor stands, sometimes doing as much damage as a late frost. In the wet years much replanting is thus made necessary.

Planting Beds.—In former years cotton was always planted in raised beds, but this is no longer thought necessary, except in lands where the wash is unusual. Most cotton is now planted "on the flat," so that in the early spring, before the crops are out of the ground, you can no longer tell at a glance whether a field is planted to cotton or not. The early acreage estimates, therefore, can no longer be relied upon as in the past.

Stands.—With good weather cotton comes up quickly after planting, the little plants showing two small leaves just above the surface. If you pull up these newly grown plants, you will find a miniature "tap root" stretching down into the ground. Cotton fields just coming up to a good stand are a pretty sight, especially in the West, where the rows of little plants, with their two tiny leaves, reach away to the horizon. It is a great advantage to have the plants come to a good stand, especially now that the weevil necessitates early maturity. A moderate rain after planting, clearing weather, and warm nights are best for new planted cotton. Cold nights even without frost stop germination, and the fields will show many a gap in the rows. Such bad stands come every year in parts of the belt, but when they are widespread, so that much replanting is needed, the crop starts with a most serious handicap. A crop delayed in the spring is dangerously late for weevil in the summer, and may be so late as to be damaged severely by frost in the fall.

Cultivation.—As soon as cotton is up to a stand, cultivation begins. The plants are first "chopped out" to leave the best number for results in the rows. The Department of Agriculture advises local experiments to determine the best "spacing" for good results. Cultivation is very important now that the belt is all infested with weevil. The old plantation rule of "once a week and one in a row" for cultivation is an excellent plan. Great care must be taken to avoid anything which will cause the plant to shed. Deep plowing alongside the plants after a crop is "set" may cause excessive shedding of the early bolls. Much care must be taken to get the best result from the fertilizers used, which should be worked to get the earliest maturity. The old custom of late cultivation to "lay the crop by" is now largely abandoned, and cultivation is kept up till the last moment, in order to keep the plant making as many squares as possible. The weevil much prefer to feed on the squares, and the late buds are therefore a protection to the bolls already on the stalk. This late cultivation, however, must be done with great care, as running the plow close enough to the plant to cause heavy shedding will be disastrous.[4]

Early Rains.—The importance of spring weather is very great, for the constant cultivation can be seriously interrupted by steady rains or showers in April, May and June. These rains will rot the seed, making much replanting necessary, and every delay makes the crop so much the more susceptible to the weevil. Moreover, if it continues to rain after the final planting is finished, then a fresh source of damage is opened. For the grass and the weeds grow as fast as the cotton, and are shortly very difficult to remove. They are not only numerous and well rooted, but cutting them out is difficult to accomplish, without injuring the cotton plants. In the years of labor shortage, it is often impossible to clean the fields, and in midsummer you will see the cotton plants practically concealed under the grass and weeds waving above them. Such fields ''got in the grass'' so badly, that the farmer was unable to secure the labor necessary to clean them. The acreage thus ''abandoned'' may amount to a considerable percentage of the total amount pitched. Still another evil result follows from these ''wet Mays,'' which are well recognized by the trade as a crop menace. Ordinarily, the cotton plant puts down a long ''tap root,'' by means of which it is enabled to obtain subsoil moisture in hot, dry, summer weather. Now, if the rains continue early in the spring, this tap root does not grow, and the plant shoots forward rapidly, without adequate roots. The result is, that when the hot summer weather appears, the cotton sheds very badly, thereby losing many of the early bolls, which offer the best opportunity for getting ahead of the weevil. Of course, there are seasons when, after a wet May, the weather turned off clear and warm, followed through the summer with showers just as needed, so that the weakened plant produced a good crop despite the start. The classic example of that kind of recovery is 1920, for that year the crop made a very poor beginning. My partners were South on a trip and returned in very low spirits, for they found grass, wet fields, poor stands everywhere, all the indications of a wretched start and a poor crop. Yet, the 1920 season was afterwards ideal, and the yield was 13,366,000 bales (linters included). So you see a wet spring need not prove fatal, although it certainly starts the crop on the downward path, and, in these days of weevil, that alone may prove the determining factor and bring about a small crop. In the years gone by, the trade used to regard a bad start as not serious, as the chances were the crop would recover. Now that we have the weevil, a late crop may recover, but there is no certainty that it will, and the chances are against it.

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[4] Bulletin 1262 of the Department of Agriculture, "The Boll Weevil Problem," contains valuable advice as to planting and cultivating against weevil.

June Prospects.—During the month of June the crop usually improves, so that June 25 condition figures, published by the Department of Agriculture the first week in July, are frequently high. The market is likely to reflect this view of the prospective supply and temporarily to decline. Hence comes the old saying: "The man who can once sell the June prospect at the August price will never have to work again." The reverse is also true, and, speaking from painful experience, if you sell the June prospect at the June price, you are likely to have some overtime work, in order to get even again.

Fruiting.—After the first of July, the crop begins to fruit, and so, even in the large crop years, it does not look so well. The first sign of fruiting comes from the "squares," or three leaves together, with the flower bud inside. The squares usually come three weeks before the bud opens into a "bloom," which is cream-colored the first day, changing to red or pink the next day, and falling to the ground on the third. A cotton field in bloom is a pretty sight with the different colored flowers scattered over it. From the time the flower drops, leaving a little pod, until this has developed into a grown "boll," and opened so that the cotton hangs from it, is usually between forty and fifty days. There is a saying: "It takes six weeks from the bloom to the grown boll," and this test is applied to late cotton in comparison with the average frost date. Every crop has more fruit on the plant than can be carried to maturity, and the excess bolls are "shed" off during July and August. The shedding varies with several conditions, namely: (1) the condition of the plant, since a weak, sappy plant, with poor taproot, will shed badly in hot, dry weather; (2) the weevil, for punctured bolls fall off; and

(3) fertilizer, since, on the weaker soils, this is necessary to hold the crop on the plant.

Fertilizer.—This brings us to the matter of fertilizer in cotton cultivation. Commercial fertilizer is used everywhere in the Atlantic, in parts of the Gulf states, in the hill lands of Mississippi and Arkansas, and recently there has been discussion as to whether it will not be beneficial in Texas and Oklahoma. Potash is used in commercial fertilizer, but it is not the absolute essential many imagine it to be. Before 1915, a popular formula was a 2–10–2, that is to say, two pounds of nitrogen, ten pounds of phosphoric acid, and two pounds of potash, to the hundred-pound sack. There are two kinds of potash, kainit of potash, which is 12.5 per cent potash, and muriate of potash, which is 50 per cent potash. The nitrates have come from Chile, the phosphoric acid from Florida, and the potash from Germany. Of course, after the War broke out, potash was lacking, although efforts were made to produce it from kelp in California, and to develop some potash beds in Nebraska and Utah. Besides the German deposits there are beds in Alsace-Lorraine, which the German government would not permit to be worked, but which will doubtless now produce potash in competition with Germany. Nitrates were produced from the air during the War, but there is a question whether the plant at the Mussel Shoals on the Tennessee River can produce nitrates commercially for fertilizer. It is a matter of price as compared to other nitrates.

During the War the fertilizer used was low grade, and had either very low potash content, or none at all. The result rather surprised the trade. Potash is not needed on all soils, and its use on heavy land, such as the red clay, is of questionable benefit. Some authorities claim that potash on heavy land is not needed, because the soil itself contains sufficient. On sandy land, however, or on land infected with what is known as "cotton wilt," potash is almost a necessity, in order to hold the fruit on the plant. Without the potash the shedding is heavy. Commercial fertilizer is needed in so large a percentage of the belt that a reduction of its use will be reflected in the yield. For example, in 1921, the use of fertilizer was cut to a minimum, owing to the financial situation, and the crop is thought to have suffered materially. The lack of potash was not so serious as the trade had expected, but the lack of any commercial fertilizer is certain to cut the yield.[5]

Some of the southern states have placed a tax upon fertilizer, both for revenue, and to insure the accuracy of the formula painted on the sacks. This tax is collected by "tags," which are placed upon the bags of fertilizer. The amount of fertilizer tags sold is commented upon each spring, both as an indication of the acreage, and of the probable condition of the crop later in the summer.

Weather During Fruiting.—The most favorable weather possible for the growth and fruiting of the crop varies somewhat with the soil and other conditions in different parts of the belt, but a few general observations can be made. Cotton is a dry, hot-weather plant, and does best with moderate moisture, hot weather, but not too long continued extreme temperatures. Hot, moist nights are also beneficial. Of course, this is the southern climate, or else cotton would not be the principal crop. Temperature well over a hundred, however, will cause heavy shedding, if it last many days, and this shedding will increase, as the heat continues and the subsoil moisture is exhausted. On the other hand, wet weather long continued is bad for cotton, especially since the weevil arrived. The damage now done in a long wet spell during July may prove irreparable, particularly, if the August following is hot and dry with a weak plant shedding heavily. This happened in 1916 and in 1921, both crops east of the River being ruined by a wet July, and the ruin made certain by a hot August.

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[5] *See* Knapp, *Method of Growing Cotton* (1913, Doubleday Page Co.).

Western Droughts.—West of the River the situation is a bit different. Droughts are very destructive in Texas, not quite so destructive in Oklahoma, and, while very serious, rather less dangerous in Arkansas and West Louisiana. Those who live in the East cannot imagine what the word "drought" means, until they have seen a dry summer in Texas and Oklahoma. I have been in Texas in a drought extending from June to September, with only a few widely separated showers during the time, and it was impossible to escape the all-pervading consequences of such dry weather. Many towns are without water, save what is brought in by the railroad in tank-cars. I recall being in one city, where the traveler was greeted by the following sign, hung over the hotel desk:

> ACCOUNT DROUGHT
>
> No Baths. No Rooms with Bath Sold.
>
> Water turned on only from 6 to 9 A. M. and 5 to 8 P. M. Guests will accommodate themselves accordingly.

The sign was literally true, and it may well be imagined that, under such conditions, vegetation suffers. In a year like that nothing is raised at all in West Texas, and only the wonderful black lands allow Central Texas to get some cotton, not a crop by any means, but a yield impossible on any other soil. In droughts the plant is stunted, one or two small bolls appearing right at the top, and growth then ceasing. This is called "blooming at the top," a phrase often heard in the dry years. Cotton which is blooming at the top is done, and will grow no more until it has had copious rains. Then the plant will take on new growth and start to fruit afresh, and, if favored with a late frost, will make additional cotton. When we have late August or early September rains in Texas after a drought, then the trade begins to figure the six weeks from the bloom to the grown boll. When those six weeks pass without frost, then the Texas crop is larger than anticipated. So we have the saying that "Texas can promise more and make less; and promise less and make more, than any other cotton state." The following anecdote contains a germ of truth in a setting of poetic license. A planter in North Texas announced one September that the drought had not left him enough cotton to pick, so he went off to California. Returning just before Christmas, he was asked on the train by a neighbor, why he did not pick his cotton. Going out to investigate next day, he found about half a bale to the acre on the plants. It had rained the day after he left home in September, there was a late frost, and that was the result.

Hot Winds.—Hot winds will much increase the damage done in hot, dry summers. There is occasional complaint of them in the East, but in the West they attain true virility. They will blow so hot that a hand held out of the car window in the shade but in the wind will scorch as though exposed to the sun. Such winds will shrivel corn in a night, turning the leaves brown, and wrapping them around the stalk. Cotton will withstand them longer, but, unless there is speedy relief, cotton is killed.

Comparison of 1914 and 1918.—An excellent illustration of what a drought will do in Texas can be made by comparing these two years, when the acreage was the same for all practical purposes, since the variation was only 100,000 out of 12,000,000 acres. In 1914, an early summer drought was relieved by soaking rains the first week in August, Texas and Oklahoma together producing about one-third the total crop. In 1918 the drought was not broken all summer. The 1914 crop was larger than the figures indicate on account of the delayed marketing due to the War. Nevertheless, that crop in Texas was 4,530,000 bales (linters included), while the 1918 crop was 2,500,000 bales (linters included). Such a variation in Texas alone can spell the difference between a good crop in the entire belt and a failure. It is no wonder Texas rain reports are carefully watched.

Frost Dates.—These are always matters of importance, but, in late and backward crops, they may become a most vital factor. Frost is of particular damage to cotton, because the crop does not mature at once, but at different times. After putting on the first bolls, the plant continues to grow, to make squares and put on bolls, to repeat the process on the higher limbs, until finally it is killed by frost. These late bolls make what is known as the ''top crop,'' which, when it matures and is picked, will add materially to the yield. In fact, the very large crops are all made by the addition of a top crop. Of course, an early killing frost will eliminate this top crop, and it will also eliminate any new growth made in Texas and Oklahoma by late August or early September rains. Therefore, in dry years, the frost date is of vital importance to the markets.

The earliest killing frost on record was in 1917, when frost reached Memphis on October 9, and penetrated to the Gulf, killing frost being reported from every station by the end of October, except Galveston, New Orleans, Mobile, and Charleston. The latest killing frost of which I can find record was November 3, 1905, at Memphis. As a rule, any killing frost in the month of October will do real damage, the extent of which will depend upon the day of the month, and the distance to which killing temperatures penetrate the cotton belt. Aside from a killing frost, there are always many alarums, many light or "white" frosts every fall.

Wet Falls.—These are the bane of the cotton world. Heavy and persistent rains, at the time when the crop is all open on the plant, will ruin the grade and materially weaken the staple. Also there are many half-rotted bolls, which have the seed "sprouting" in them, the cotton from which is most unsatisfactory for spinning. The scarcity of good grade and staple causes troubles of which we need not speak here. Moreover, cotton picked wet, ginned wet, and shipped wet, is the source of infinite damage and loss. The trade would far rather have a short crop with all its attendant risks, than a large crop of "wet" and "damaged" cotton. Nothing has caused more trouble in the cotton trade than the wet falls, of which 1906, 1913 and 1919 are the classic examples.

CHAPTER III

INSECT PESTS

Minor Insect Pests.—Like all crops cotton has many insects preying upon it, but most of them are easily controlled, either by poison, or by suitable methods of cultivation. In early spring cutworms, and what are called "May beetles" in Texas and Oklahoma, injure the stands. These pests are a nuisance and may do much damage in a rainy spring, but they can be controlled by poison. A little later appears the cotton "louse," or aphis, also held in check by poison, but often doing real damage. Then we have grassworms, which prey upon the stem of the plant, and also grasshoppers, particularly in Texas, both of which are controlled by shallow cultivation and poison.

Defoliators.—The worst of these is the famous "army worm," which, some forty years ago, absolutely ruined several crops. These live only upon the cotton plant, which they strip of leaves. When they arrive late, so that the fruit is already on the plant, the loss of the leaves is not so serious, but earlier in the year they must be fought vigorously, or they will prevent the plant from fruiting. In 1911, we had an army worm scare, both Mississippi and Alabama being infested, but the worm arrived late in the summer, and a large crop was already on the plant. Another defoliator is the "red spider," which collects in masses on the under side of the leaf, sucking out the juices and turning the leaves red. They will kill the plant in this manner if not checked. They can be controlled by poison, and by careful cultivation. They collect on weeds as well as on cotton, so that cultivation removes their shelter.[1]

Major Insect Pests—*Boll Weevil; Habits.*—We now come to the most destructive pest of the past thirty years, the Mexican cotton "boll weevil." The trade refer to him respectfully as "the weevil." He has been so destructive that he has materially changed the methods of cotton cultivation, and the character of the cotton produced in many sections. The appearance of the weevil has been variously described, some likening him to a small elephant because of his proboscis, and some to a diminutive horseshoe crab. When first emerging he is yellowish in color, but soon changes to a grayish hue, becoming almost black. He can easily be mistaken for other species and *vice versa.* The weevil passes the winter either as an adult or as a beetle. The average survival of weevil over the winter ranges from 11 per cent in a mild winter to 2.82 per cent in severe winters. The average of experiments in Texas and Louisiana from 1906 to 1911 was 6 per cent. In 1914 and up to 1920 experiments were made by the Government at Tallulah, with from 20,000 to 30,000 weevils a year, and the average survival varied from 0.3 per cent to 5.9 per cent. The emergence in the spring varies with the rainfall and temperature, but, as the weevil is all over the belt, the period of emergence is prolonged from March till June. The individuals best protected suffer least in hibernation, and this also tends to lengthen out the emergence. In addition to burning old cotton stalks, the farmer can reduce hibernation by clearing up all brush and rubbish around the fields. Weevil hibernate very successfully in timber, consequently, fields next timber are most infested. It will pay, therefore, to poison these fields always. After emerging, weevil can do without food for some time. Experiments have shown a maximum survival without food for ninety days, and many weevil have survived from six to twelve weeks. An egg hatches in about three days, and, in from seven to twelve days, the larvae or grub passes into its pupa stage, which, in turn, lasts some three to five days, when the adult issues, and, in about five days, begins the production of another generation. Males and females are produced in about the same number. The males do not move until the food deteriorates, but the female goes around laying eggs, either inside the bud, or, more frequently, by boring a small hole in the square, crowding the egg inside, and sealing it over for protection with a little spit or wax. They do not lay eggs in squares visited by other females, until late in the fall, when all fruit is infested, when several eggs will be found in a single square. As long as there are squares to be had the bolls are not damaged to any extent and have a fair chance to mature. An interesting habit of the weevil is to pretend death, contracting their limbs and falling to the ground, when disturbed. As a rule weevil do not live more than fifty days, but in experiments one weevil survived from December 10 till October, or about eleven months. The weevil can fly, and has been known to fly over forty miles in a short time, although most flights are much shorter. There is a so-called ''dispersion period'' from the middle of August till the end of the season, when most of the flying is done.

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[1] A complete account of all minor pests can be found in Farmers' Bulletin 890, U. S. Dept. of Agriculture.

History.—The insect first crossed the Rio Grande from Mexico, near Brownsville, in 1892, and slowly spread over the entire belt. It is not known whether it flew over the river, or whether it was brought over in seed cotton. At any rate it spread slowly through southwestern Texas, and finally over the entire state. By 1900 about half of Texas was infected, by 1903 the weevil was in Louisiana, by 1907 it had crossed the Mississippi River, and in 1910 and 1911 it reached Alabama, crossing the state slowly, until it touched the Georgia line in 1914. The weevil spread rapidly the next few years, reaching South Carolina in 1917, and getting well into North Carolina by 1921. An interesting method of observing the increase in the damage done the cotton crop may be seen from the following table of estimated percentage of weevil damage for ten years: 1911, 1.28 per cent; 1912, 3.26 per cent; 1913, 6.69 per cent; 1914, 5.91 per cent; 1915, 9.93 per cent; 1916, 13.36 per cent; 1917, 9.34 per cent; 1918, 5.83 per cent; 1919, 13.20 per cent; 1920, 19.95 per cent; 1921, 34 per cent.

Weevil Control—*Natural Adversaries.*—The weevil have a number of parasites which prey upon them and tend to keep the number down. Ants are known to attack the larvae and grubs and are known to have killed as high as 25 per cent in a single field. The most important natural means of killing weevil is the weather in the winter and summer. We have seen already that the weevil is reduced by winterkill in severe seasons. In the summer, when infested squares are exposed to the direct, unobstructed rays of the sun, the mortality is very high. The amount of destruction is in direct proportion to the shade, and as high as 90 per cent of immature weevil have been killed by the sun. This explains the fact that hot, dry weather reduces weevil damage, while a rainy, cloudy summer favors their rapid multiplication.

A western drought will much reduce weevil damage, but, as it will also reduce the crop, the balance is difficult to find. As an illustration let us take the two seasons of 1916 and 1918. There was a variation of only 1,000,000 acres out of 37,000,000 between the two years. The season of 1916 was an ideal weevil year, a comparatively mild winter, followed by a wet summer. The season of 1918 was the exact reverse, the coldest winter on record being followed by a very hot, dry summer, and the worst drought on record west of the River. The percentage of weevil damage in 1916 was 13.36 per cent and in 1918 only 5.83 per cent.

Yet the total crop in 1916 was 11,363,000 bales and that in 1918, 11,906,000 bales (linters excluded in both years). It can be seen that the "dry weather" remedy may be as bad as the disease.

Cultivation.—The Department of Agriculture has devoted much time and effort to experimentation with weevil in order to get the best results in weevil control. We have already referred to the fall destruction of old plants, which is most important, not only because a certain number of old weevils are destroyed, but also because numbers of immature weevil are prevented from hibernating. The difficulty with the removal of the old stalks lies in the fact that it is the most effective when done before killing frost. This naturally tends to prevent the full effect of this method of control in those sections where frost normally comes before the crop is picked. Here a partial result of the same character can be accomplished by grazing stock in the fields. All "volunteer" cotton in the spring from the old crop should at once be destroyed, for the weevil seek these large plants in the early spring on which to deposit their progeny, which thus come to maturity earlier than otherwise would be the case. All rubbish should be removed and burned to reduce hibernation. Timber is a favorite hibernating ground, especially in the more northern sections, and care should be taken to poison thoroughly all fields near standing timber.

The cotton plant flowers and blooms, and makes squares and bolls all summer. Prior to the weevil this was a great asset, since it allowed the crop to recover from a bad start. Now, however, the weevil multiply so fast that they will puncture bolls and squares at the end of the summer more rapidly than the plant can put them on. It is a race between the weevil and the cotton, and every care should be given the plants to force them along, so as to get the largest crop of early bolls, and keep them from shedding. The plant always sheds a percentage of its fruit, so that the early crop may not lose many additional bolls from weevil. That is to say, the additional number of bolls punctured by the relatively small number of weevil will not add to a normal shedding. But, with later cotton, the case is far different. Here the squares are immediately infected, and in case of bad infestation, the later squares are principally valuable because they keep the weevil off the grown bolls. Anything that will hasten the crop to maturity is essential in weevil territory. Local conditions vary so much, that general statements as to fertilizer and other matters are valueless. The simple fact remains, that anything that will put early fruit on the plant and keep it there is an essential.

Seed.—It goes without saying that early maturing seed is needed in weevil territory. The old-fashioned, big-boll, long-staple cotton was early abandoned. Small-boll, short-staple, early varieties took the place of the old cotton. The Department, however, has developed a number of long-staple varieties, which mature early. Among the extra staple cottons developed by the Department for the uplands may be mentioned the Webber and the Express. A variety known as Meade, after the late Rowland G. Meade, who bred it to uniformity, is suggested as a substitute for the old Floradora Sea Island.

Poisons.—The trouble with all poisons has been the fact that it is difficult, if not impossible, to poison the weevil's food, because they feed from the soft part inside the square, which they reach by inserting their probosces. Professor Coad, at the Delta Laboratory, Tallulah, La., found, by long and careful observation, that the weevil had a distinct tendency to seek moisture wherever it could be found on the plant. By experiment he found a poison which could be dissolved by the moisture or dew on the plant, would dry out the following day, resolve that night, and so on for three or four days. This poison is calcium arsenate and the proper formula can be had from the Government Laboratory at Tallulah, or from page 18, Bulletin 1262, Department of Agriculture. The powder is in the form of a flour-like dust, and must be sprayed on the plants by various types of "dusting machines." It should be applied while the air is still and the plants are moist, in other words, it is, as a rule, practicable only at night, and then only when the air is still. Otherwise the dust blows off the plants and is lost. Also, if a heavy rain occurs within twenty-four hours, the application should be repeated. The Department advises the use of five to seven pounds of calcium arsenate to the acre, with applications every four days, until three applications have been made. The Department advises against the use of calcium arsenate, if the cost of the poison, labor, and depreciation on the machine will total more per acre than the going value of one hundred pounds of seed cotton.

Poison—*Dusting Machines.*—After the poison was found, the next step was the perfecting of a means of application. The Delta and Pine Land Company of Mississippi, at about this time, became much interested in the work and their experts' laboratory coöperated with Professor Coad. They also expended both capital and labor in working on the various experimental machines. The first scheme was to apply the poison dust with a hand gun, and these are still used. The Department advises that these hand guns are not very satisfactory, because they are fragile and difficult to operate. They should never be assigned more than eight acres, and they are not satisfactory in any event in an organization containing more than twenty-five acres. Their depreciation per season is 100 per cent. The next step was to find some sort of tractor which could move through the rows, without injury to the plants, and spray the dust over several rows at a time. The first machines had a gasoline motor and were unsatisfactory, because operation at night necessitated more expert labor than was available. The next machine was a one-mule tractor, with the spraying device obtaining power from the axles. This machine is handled by the operator, like a walking cultivator, and will treat two or three rows of cotton at a trip, through its two nozzles. Such a machine can take care of some sixty acres per season, and costs from $100 to $125. The next machine is a two-wheel, two-mule machine, which straddles a row, and will cover from twenty-five to thirty acres a night and should be assigned not over one hundred acres a season. This machine costs around $250 to $400, has three nozzles, and is best suited to large farms.

Mule Guns.—These have just been invented and are not yet perfected mechanically, although it is reasonable to suppose they will be. They cost between $65 and $75 and are thought to have a wide future. Mr. Saulsbury of the Delta Company says: "We thought poison not practical for the entire belt until this year (1922), when we think that if the mule-back sprayer could be perfected, the price of it would not be out of the small planter's reach and could be successfully used by him. One mule with one machine (costing about $65) would easily take care of a crop of twenty acres. A mule can poison in a night from ten to twelve acres, while the wheel machines will poison from twenty to thirty acres, depending on the length of the night, or rather the length of time the dew is on, and whether or not it is a long or a short field requiring a great deal of turning."

Other Methods.—No other method of poison has been discovered that will equal calcium arsenate dusting. There has been a great deal said about applying the poison mixed with molasses or other sweets. Professor Coad states:

"The idea of using poison and molasses to kill the weevil is an old one. I have been in this work for thirteen years now and it has been rediscovered almost every year during that period. However, it has received unusual publicity during the past year (1922) because of the fact that several very good men have become thoroughly converted to the idea. It is true that the sweets under certain conditions influence a certain amount of weevil control, but in many experiments we have yet to find where dusting with calcium arsenate is not more profitable and more effective than the use of poisoned sweets."

Weevil Poisoning—*Practical Experience.*—The Delta Company have found it necessary to poison their entire acreage. They have proved to their own satisfaction that poison should be used as soon as 5 per cent to 6 per cent of the squares are infested, and then kept up till the middle of August. The Department advises that poisoning be started when from 10 per cent to 15 per cent of the squares are punctured. The difference in the character and value of cotton raised will doubtless have something to do with the amount that can be expended upon poisoning. The Delta people ascertain the percentage by having men go through the fields by day, picking squares at random, up to a certain number, and then counting the percentage infected. When an infested area is found, it is carefully examined to find the extent and percentage of infestation, and the poisoning can thus be more successfully directed. Some areas require to be poisoned only once or twice and some, four or five times. The Delta people figure the cost against all their acreage as a part of the regular crop expense. With the poison properly applied, the cost is figured by them at $2.50 to $3 per acre.

From a smaller planter, but a large farmer, in the Delta, the following figures were obtained, season of 1921: On 120 acres poisoned the yield was 21,700 pounds lint cotton; on 120 acres not poisoned, the yield was 8,735 pounds. The gain was 12,965 pounds of lint, or, to put it another way, the poisoned area produced 47 bales, lint, bagging and ties included, while the non-poisoned made only 19 bales. Allowing for 50 per cent depreciation on the machine used—a Niagara—expense of land improperly poisoned, cost of the calcium arsenate, labor, repairs, and miscellaneous, the total cost was $1,156.49. The actual gain was 12,965 pounds lint, and at the average price obtained of 25 cents per pound the amount received was $3,241.25, from which, deducting the expense, we have a net profit from the use of poison of $2,084.76. The Government advises figuring the depreciation on all wheel machines at 25 per cent, so these are full figures.

Cotton Bollworm.—Another major pest is the cotton bollworm, which, next to the weevil, is the most important insect attacking cotton. Years ago, means of poisoning against bollworm was discovered, but now, it is found that the poison method used against weevil will also control bollworm.

Pink Bollworm.—This is a most serious menace, recently introduced into Texas. The worm has been traced back to Egypt, where it is claimed the damage has run as high as 40 per cent of the crop. The pink bollworm has been traced from Egypt to Mexico in infected seed. Fumigation of foreign cotton brought into this country is required, but in some manner, infected bales from Mexico, en route to Galveston for export, got into Texas in 1915. The train was caught in a Gulf hurricane, the cars washed from the track and broken open, so that the bales were spread over the country. The adjacent counties developed pink bollworm. The actual cotton yield was small, and energetic measures were taken by the Department of Agriculture, in conjunction with the state of Texas. The infected area was quarantined, declared a non-cotton zone, and the farmers reimbursed by the state. The pest is considered to be stamped out here after several years' work. Most unfortunately, infected seed from Roswell, New Mexico, was shipped to Central Texas, so that this dangerous insect has reappeared in the cotton belt. The state and the Department of Agriculture are taking the same energetic measures as before, and it is to be hoped they may succeed.[2]

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[2] The literature on boll weevil includes numerous bulletins from the Department of Agriculture, of which the latest is 1262.

There is an interesting account of both weevil and pink bollworm in *Shepperson's Cotton Facts* (1921 edition).

I am under great obligations to Mr. L. K. Saulsbury of Memphis, who is President of the Delta and Pine Land Company, for much valuable and up-to-date information on the subject. This company has from the start taken the lead in assisting the Department in control experiments, and in using the Department's methods in the actual operation of their place. Mr. Saulsbury is very well-known as a weevil authority from the practical standpoint.

Finally, I am equally indebted to Professor R. B. Coad of the Delta Laboratory, Tallulah, La., for his courteous and prompt reply to inquiries on the subject, and for information furnished.

Any one desiring the latest information on the weevil should communicate with the Government's Delta Laboratory as above. They will give advice and also test samples of the calcium arsenate to be used.

CHAPTER IV

RECENT COTTON CROPS

By this time the reader wonders if we have ever produced a large cotton crop, and to satisfy his curiosity and as an illustration of the practical results of the factors we have studied, a history of the past eighteen crops may be of interest. Prior to the weevil, the South kept pace with the increase in the world demand, and over an average of years, the crop was always larger. Since the weevil, there are predictions the large crops are a thing of the past, but that will depend upon weevil control. The problem may be stated thus: either the South will conquer the weevil, or the South will lose her leadership as a cotton producing country. The chances are against the weevil, for in the past the South has overcome problems as bad as he presents. Predictions on that score will be deferred to a subsequent chapter.

The Large 1904 Crop.—In 1903, the "Sully Year," there had been a crop disaster, very high prices, and many predictions that the seed had so deteriorated that no large crop would ever be possible. The following season exploded the seed myth for good and all. We had a poor winter, dry and not very cold, but spring was early, May was dry, and June was a good growing month. The result was a prospect at the end of June, which was overpowering. In common with the rest of the trade, I supposed both crop and market ready made, but we had a striking illustration of the old adage about "selling a June prospect," for hot weather and high temperatures during August in Texas cleaned the market of a short interest in a hurry. However, we need not have been alarmed, for good rains relieved the West, the fall was beautiful with a late frost, and the ultimate yield was 209 pounds to the acre, 13,654,000 bales (commercial crop). This was the largest crop on record to date, and as business was in a decline due in part to the outbreak of the Russo-Japanese War, prices under the combination of rather poor trade and large crop sank to 6.85 New York December.

1905 Crop.—The low price caused trouble South and there was an agitation in the spring to reduce acreage, which being taken up by the conservatives as well as the radicals, had some influence. The area under cotton fell from 31,000,000, in 1904, to 27,000,000 acres in 1905. This was a wet spring and the rains lasted until June, so that the crop fell badly into the grass. The summer was fairly good, but the crop did not recover entirely from the start, and despite a fairly late frost, the yield was moderate at 11,234,000 bales (commercial crop), 202 pounds to the acre. The threatened revolution in Russia prevented the market from responding to the reduced crop prospect early in the fall, but later, when the troubles there subsided, prices advanced rapidly until the market reached 12.60 in December.

1906 Crop.—The crop had a good season in the ground, and the higher prices of the preceding season caused an increase in acreage to 32,000,000 acres. The crop progressed favorably all summer and in September prospects were excellent, although very good trade held prices up above 9 cents. A Gulf storm, always known as the "Mobile hurricane," struck the Alabama coast in early October and swept across Alabama, Mississippi and Arkansas. The cotton was all open in the fields, and the damage was further increased by a spell of persistent rains, so that the quality was irretrievably injured, and losses of merchants, who had sold forward, were very great. The price had advanced rapidly on the storm news, but subsequently, except for the higher grades, went down again, when it was ascertained that the damage was all to the quality. The total crop was 13,540,000 bales (commercial), 207 pounds to the acre. The losses of the trade in this year were very severe due to the destruction of the quality by the storms.

The Panic Year Crop of 1907.—The acreage was about unchanged but the season was very different. This crop had a late start, due to April frosts, and later in the spring heavy rains put it badly in the grass. This handicap was not overcome in the Atlantic, while in Texas and Oklahoma a severe drought reduced the yield. The total crop was only 11,441,000 bales (commercial), 173 pounds to the acre. The financial panic prevented any response in prices commensurate with the crop failure, although at one time, middling in New York was 13.55.

1908 Crop.—The following winter was favorable, and the acreage was a bit larger at 33,000,000 acres. This crop had heavy spring rains in the Atlantic, but the industrial depression supplied a surplus of labor and this handicap was overcome. This season was notable for the fact that no bad weather appeared after the early rains, and no crop scare occurred. The fall was late, and the crop large at 13,817,000 bales (commercial), 202 pounds to the acre. The combination of large crop and indifferent trade put prices below 9 cents again.

1909 Crop.—*First Scales Year.*—This was a small crop year with an active market, steadily rising prices, improving trade, and active competition for both the surplus carried over and for the current crop. This is known as the "First Scales Year," from the name of an operator prominent on the long side, who began his campaign on the theory that a lack of a season in the ground, west of the River, would lead to a small crop. In the East the start was late, with heavy rains through May, and these rains extended to the Valley in June. The June 25 condition actually showed a falling off from May. During the summer a severe drought took place in Texas and Oklahoma. Finally, there was an early frost, so that this crop was a disaster, 10,513,000 bales (commercial), 158 pounds to the acre. It was early evident there would be a shortage of supplies, and the market rose to over 16 cents by January. Here there was a sharp reaction, but a series of "corners" took place in New York during the spring and summer, culminating in a price of 20 cents for August contracts.

1910 Crop.—*Second Scales Year.*—The high prices of 1909 brought an increase in the acreage to 33,418,000 acres, but the crop disaster nearly equaled that of the preceding year. No winter rainfall sufficient to overcome the results of the summer drought was reported from the West, so that the lack of subsoil moisture was again serious. In the East, the latest killing frost on record, during the last week of April, made much replanting necessary. Thus the crop was very late at the outset, and this was a serious handicap. Another severe drought occurred during the summer in the West, but there were more showers in North Texas than in 1909, so that the crop was larger in Texas and Oklahoma. A moderately early frost did great damage because the crop was so backward, but the crop turned out larger than the trade had expected. The yield was 12,075,000 bales (commercial crop), but the general estimate was so much lower that prices remained high until January, when increasing evidence of the larger supply, together with a disturbance in China reflected in the dry goods markets, caused a sharp decline.

1911 Crop.—This was almost an ideal season. The very high prices of the two preceding years brought a very large acreage, 36,681,000 acres. Late winter rains in Texas and Oklahoma were followed by a drought over the whole belt in May and June. As the drought lasted into July throughout the West, there was growing anxiety about the crop. The subsoil moisture carried the crop along safely until the drought was broken by ample rains in the middle of July and again in August. The weevil reached Alabama this year, but the dry weather prevented much damage, while an army worm invasion was too late in the season to be damaging. The yield was large, 216 pounds to the acre, and this was the largest recorded crop, being 16,101,000 bales. The weight of this crop coming at a time of only moderate trade broke the price below 9 cents. January New York sold as low as 8.50 during the month of December.

1912 Crop.—The low price caused a cut in acreage to about 34,000,000 acres. Texas and Oklahoma had a good season and fine crops. Spring floods, heavy May rains, and heavy grass gave the East a poor start. A dry spell in August caused a weak plant to shed heavily, while there was heavy weevil damage in Mississippi and Alabama. The frost was late, and this, together with the good Western crop, brought the yield up to 14,104,000 bales (commercial), 200 pounds to the acre. The outbreak of the Balkan War caused a sharp drop in prices during early October, but when it was found that the trouble would be localized, and Europe would not be involved, the market improved. Trade was better and prices went over 13 cents in early December.

1913 Crop.—*Bad Fall.*—The advance in price brought an increase in acreage to 37,458,000 acres, the largest on record to date. This season was the exact reverse of 1912. The East had good crops, while the West suffered first from a drought, and then from heavy rains at picking time. January delivery sold as high as 13.85 in the early fall, but when it was found the damage was to the quality and not to the quantity, prices went down again. The crop was 14,552,000 bales (commercial), 190 pounds to the acre. There was a great deal of most undesirable cotton in this crop, good grades went to large premiums and were impossible to obtain after the first of January. This was a disagreeable, vexatious and troublesome year.

1914 Crop—*War Panic; Large Yield.*—The acreage remained about the same, but the season was excellent. Good winter rains, a fairly cold winter, and a favorable spring gave the crop a good start. There was drought in Texas all through July, which was causing alarm to the markets when the rumblings of the European War were heard. The approach of the catastrophe first checked the advance, then led to a precipitous decline, and finally necessitated the closing of all the Exchanges. The market had broken as low as 9.50 on the news of a large failure just before trading stopped, but had rallied to 10.75 for December New York just at the close. The outbreak of war removed all export demand for the moment, while the financial confusion stopped domestic trade. Prices went to all sorts of figures in the South, where, without the usual organized methods of trade, great confusion and uncertainty prevailed. Meantime, August rains had effectually broken the Texas drought, the frost was late, and the yield very large, 224 pounds to the acre. This crop is supposed to have been the largest grown, but due to the stoppage of business, the commercial crop was only 15,136,000 bales.

War Crops—*1915.*—A concerted effort upon the part of the cotton trade and bankers, together with the financial confusion left over from 1914, led to a reduction in acreage to 32,107,000 acres. There was ample winter moisture, but there were heavy spring rains, lasting into June, and causing much trouble with grass. In August a severe Gulf hurricane entered the belt at Galveston, where the storm is said to have been as severe as 1900, although the sea wall prevented another disaster. This storm did much damage, blowing down plants, and blowing out cotton from the bolls, and was followed by another nearly as severe, which came into the belt at New Orleans. The damage to the grade was fortunately light, owing to the fact that the one storm was in August and the other did not last long. The high winds carried the weevil far and wide and laid the seeds of trouble for succeeding seasons. The frost was late, but the yield was moderate, 12,862,000 bales (commercial crop); yield per acre, 176 pounds. The war demand began to increase the number of linters, thus swelling the commercial crop figures. The linters this season were 889,000 bales. Prices advanced during the year owing to the smaller yield and to the increased demand on account of War requirements. January New York sold up to 13.08 during October.

1916; Weevil Damage.—The improvement in prices led to an increase of acreage to 36,000,000. This year was one long crop disaster. The supply of labor was small, the fertilizer was poor in quality and scarce in quantity, and the weevil were present in larger numbers and over a wider area. Heavy rains and a cold, wet May put the crop behind and in the grass; while, during July, persistent rains east of the River exceeded anything on record and enormously increased the weevil damage. Meantime, Texas and Oklahoma suffered from a severe drought. The fall was favorable and the frost late, but the summer damage was irreparable. The crop was 12,738,000 bales, commercial, but included 1,330,000 bales linters, as the oil mills were now cutting all the lint possible. The yield per acre was only 157 pounds. The market was excited and active all season, due to the discounting of a small supply, to the inflation brought about by the War, and the needs of manufacturers. The highest price reached was in the fall, when January New York touched 21.19, and the lowest came on February 1, 1917, when the German submarine proclamation was issued, and prices broke five cents a pound overnight. May delivery in the New York market sold at 12.75 that morning.

1917; Very Early Frost.—The February panic, weevil damage, and lack of labor all combined to reduce the acreage to 34,900,000 acres. The crop had a bad start, heavy spring rains persisting in the East. The labor supply was small and the crop could not be properly cleaned and was backward from the start. The growing season was fairly favorable, but the earliest killing frost on record hopelessly ruined the crop. The market had touched 19.45 for New York January before the frost, but at once started to improve, and advanced rapidly until, during the month of December, January delivery sold at 30.80, a price not equaled since the days of the Civil War. The commercial crop was 11,865,000 bales, of which 1,082,000 bales were linters, and the yield per acre was 160 pounds.

1918; Disastrous Drought.—The acreage was 37,207,000 acres, or within 200,000 acres of the record planting, but the crop was again a failure. The winter moisture was deficient, a fact destined to be of most serious import, for the soil was entirely without subsoil moisture. The weevil were reduced in number by a very cold winter, so that the damage from insects this season was 23.5 pounds to the acre. Nevertheless, a disastrous drought more than offset this favorable factor. The drought set in west of the River in July, with very high temperatures, and this ruined the Texas and Oklahoma crop. The total yield was only 11,360,000 bales, of which 889,000 were linters, while the production per acre was 160 pounds.

The market was less active than in the preceding two years, but the fluctuations were worse. The price fell to 23.05 for July delivery in New York in the spring, because of a good crop outlook, and the difficulties of exporting cotton, now that all freight room was controlled by the Admiralty for War purposes. When the damage to the crop became evident in August, prices began to advance, and this improvement in the market became almost a panic, when it was discovered that the American mills had not bought forward against their orders. During this rush to cover, prices advanced so rapidly, that on September 3 January delivery in New York sold at 36.35, an advance of 12 cents a pound in a month. The market was less active until the Armistice, when prices broke sharply on the fear of the cancellation of war orders. The Government tried some experiments in the line of market control, but it soon became evident that the price would improve if left to the ordinary influences of business, and the Government withdrew. Opinion as to these control measures was much divided.

1919 Crop—*Wet Fall.*—This was essentially a war crop, for neither fertilizer nor labor were in any better supply. The decline in price, and the crop disaster of the year before brought a reduction in acreage to 33,960,000 acres. The winter was mild, and the spring wet and backward, so that weevil damage was much increased. The insect damage this season was 56.4 pounds to the acre. Moreover, the fall was very wet, and the damage to the quality severe. The result was a high premium on the better grades, and a large supply of poor cotton. The trade losses were not so heavy as in 1906 and 1913, because less had been sold forward, and because the damage came in such fashion that it was foreseen. The yield was 12,252,000 bales, of which only 610,434 were linters, the mills having gone back to their peace time cut. The yield per acre was 161 pounds. The market was wild all season, and quite active at very high prices. January New York before it expired sold up to 38.86. Speculation was active in all markets this year on the idea of a "post war boom," and in cotton the short supply added to the excitement.

1920 Crop—*Panic Year.*—The acreage this year was large at 37,043,000 acres, but a wet backward spring and a poor labor supply, led to much abandonment of cotton lands. The start of this crop was very poor, but, after the middle of June, the weather was remarkably fine, and the recovery from the start was phenomenal. The frost date was normally late, and the crop was 13,366,000 bales commercial, of which 440,000 were linters. The yield per acre was 178 pounds. The winter had been fairly cold, and the summer was not unfavorable but the increase in weevil infestation was now so large, that the percentage of estimated weevil damage this season was 19.95 per cent, the largest to date. The last of the war boom, together with the scant supply of deliverable cotton, led to a corner in July New York, which sold at 43.75, the highest price touched since the Exchange had opened. The financial and commercial crisis then came to the front. The signal for the collapse had been a severe decline in the price of raw silk early in the summer, and the movement spread to one market after another. The commercial crisis was severe and cotton was no exception to the general rule, prices getting as low as 13.92 for January delivery in New York, late in the fall. The losses of the cotton trade were very severe, especially so in the South and in Liverpool.

1921 Crop.—The acreage was severely reduced, being estimated by the Department as low as 26,519,000 acres in June, although these figures had to be revised upwards to 31,678,000 acres later in the year. The discouragement of the low prices and poor financial situation led to a small use of fertilizer and indifferent cultivation. The growing season was indifferent, but the weevil damage was very large, the Department estimating the percentage at 34. The price advanced sharply in the early fall to over 21 cents. The ginning figures showed plainly that the Government had much underestimated the crop, and this disappointment led to a subsequent decline to around 17 cents. The crop (*Chronicle* figures) was 11,494,720 bales commercial, but these figures are misleading, because much of the 1920 surplus came into sight this year. The final United States Census Bureau ginning report showed only 7,953,641 bales of 500 pounds each.

CHAPTER V

PREPARING CROP FOR MARKET

Picking.—The first step in preparing the crop for market is to gather, or as it is called to "pick" the cotton. This is done by hand, wherein cotton differs from the other staple crops which are gathered by machinery. Aside from the constant bending over, the actual physical effort involved in picking cotton is not great. Each picker, man, woman or child, has a long bag, fastened across the shoulders and dragging behind on the ground, into which the cotton is put as fast as pulled from the bolls. These bags are emptied into baskets conveniently placed at the end of the rows, and the baskets are weighed up at the end of the day, so that the amount picked can be credited to each individual. Pickers are paid on the basis of the number of hundred pounds of seed cotton picked. Before the World War, a dollar to a dollar and a quarter a hundred was considered good pay; but since then the rate has advanced. The process of readjustment of farm expenses has been going on for the past three years, and any definite figures now given would be misleading. It can be said that the rates are approximately double those above, but they are expected to be reduced. In thinking of the cost of picking, it must be remembered that the smaller farmer, the renter and the cropper, all pick their own cotton. After weighing, the seed cotton is usually stored in seed houses on the ground, until there is opportunity for a trip to the gin.

Picking Dates.—Cotton does not open all at once, but slowly, over an extended period, so that picking continues each fall for several months, depending upon the weather, the size of the crop, the labor available, and other factors. Picking should be commenced just as soon as there is enough cotton open to give a good day's work, and should be pursued steadily as long as weather will permit. Cotton deteriorates in various ways if left open on the plant, and the sooner it is picked the better. Even so, there are always delays, and in some years, picking is not finished until well into the winter. The average dates for picking are as follows: Texas, omitting the southwest which is very early, August first, and gradually later to the north, until picking has begun by September first in North Carolina and September 5 in Oklahoma. Picking should be finished by December, except in Tennessee and Arkansas, where the average date to complete the picking is as late as January fifteenth. These are merely average dates, and picking may begin earlier and finish later, depending upon the weather and crop. The percentage of the crop ginned to November first, since 1915, is as follows: 1915, 66.7 per cent; 1916, 75.9 per cent; 1917, 63.9 per cent; 1918, 65.3 per cent; 1919, 55.7 per cent; 1920, 56.6 per cent; 1921, not yet available.

Picking and Labor.—Doubt is often expressed as to whether there will be pickers enough to gather a large crop, and it is, of course, a matter for abstract calculation, whether the South can raise a crop it is impossible to pick. A man unaided can cultivate more acres than he can pick. Still, it is not likely that labor will be so insufficient that the crop cannot be picked, if weather permits and prices are attractive. Small farmers expect to have all their families help in picking. Nor do the negroes dislike the job in good weather. It is a nice, sociable sort of work, and in the decade before the War there used to be much complaint that, during the picking season, it was difficult to hold house servants who had just come from the country and wanted to go back and pick cotton. Of course, in wet weather, it is difficult to get pickers, and, if the gathering of the crop be delayed until really cold weather, then it is hard to induce the negroes to work. Under such conditions, a lot of cotton is either unpicked, or, if prices are attractive, is picked the following spring. Generally speaking, however, there has never been a crop not gathered for lack of labor, although other factors have caused cotton to be left on the plants.

Care Necessary in Picking.—Care must be taken not to get any more foreign substance into the cotton than can be avoided, for trash lowers the grade. It is not easy to control ignorant, or rather careless, negro labor and some loss is incurred every fall through the lowering of grade by indifferent picking. When storing cotton in seed houses, care should be taken to avoid mixing different grades and staples together. The danger of such mixing is one of the strong arguments against storing cotton ''in the seed'' for any length of time. Cotton picked late is almost inevitably lower in grade, and unless great care be observed, such cotton will get mixed in seed houses with earlier and better grade pickings. When picked wet, cotton should be spread in the sun and dried before going to the gin. This is often impossible because the rain continues, and then the cotton is ginned wet. This is bad for the farmer, who, far from gaining by the additional weight of the moisture, loses heavily from the ''dockage'' when the bale is reweighed. The Good Lord sends the weather, and to this extent the farmer is helpless, for, if it rains, and continues to blow and rain, his cotton will be low in grade, no matter what he does. He may mitigate the calamity somewhat by careful picking, but he cannot do much. On the other hand, there is no excuse for his penalizing himself in good weather by careless picking and handling of seed cotton. Any country shipper can show you farmers whose crop is of good grade with any luck at all in the weather, and other men, whose crop is always off in grade no matter what the weather. When I was in Arkansas, we handled the crop of two farmers whose methods differed so, that the grade of the cotton could be foretold from the owner's name before the samples were seen.

Mechanical Cotton Pickers.—The question of a mechanical cotton picker has exercised the minds and stimulated the imagination of the trade for fifty years, and the solution is yet to be found. The trouble is, that, unlike wheat, cotton is not harvested all at once by one operation, but, on the contrary, cotton fruits again and again until frost, and picking must go on over the same field many times, as the bolls open. The problem is to find a machine which will pick the cotton from the open bolls, not injure the plant, and leave the unopened bolls safe to ripen. Moreover, there is great variation in the character of the fields, from the small hillsides of the Atlantic, through the mud of the Valley, to the broad prairies of Texas and Oklahoma. The machine must be self-propelled, because to drive horses or mules between the rows of full-grown cotton with open bolls would be difficult without great damage. It can be seen that the problem is not simple, and that, simply because mechanical pickers have been in use to harvest other crops, it does not follow cotton can be mechanically gathered. The trade hope it will be some day, but they are not sanguine.

There have been two types of mechanical pickers. One is to have a vacuum pipe with a nozzle to suck the cotton from the bolls into the sack. This will work, but it is a question, after you have supplied the fields with the pipes and necessary apparatus, whether the negro with the nozzle will pick enough additional cotton to pay for all the equipment. The second idea is to have a gasoline-propelled machine working on the principle of a gin, and extracting the cotton from the boll by revolving saws. The one I saw at work had the plants conveyed into a sort of mouth in front as the machine passed over them. The saws would reject the unopened bolls, and simply extract the open cotton, while the plants, bent over as the machine passed, recovered themselves as after a summer thunder shower. A good many leaves were stripped off, but that did not matter so late in the fall. The objections to the machine were: (1) it is large and cumbersome and turns with difficulty in small fields; (2) it lowers the grade by reason of bits of boll, leaf and pieces of small limbs broken off and caught in the cotton; (3) the machines are expensive, and it is a question whether the labor cost is sufficiently reduced to make them practical as against hand picking. The first two objections are mechanical and will be overcome in fact, a cleaner device has almost removed the second objection. The question of expense and of the amount of additional cotton picked per man as opposed to hand picking has not yet been solved.

Ginning—*General Remarks.*—The next step is to remove the seed from the lint. Roughly speaking, cotton contains, as picked, about twice as much seed as lint, that is to say, it will take about 1,500 pounds of seed cotton to make a 500-pound bale of lint cotton. As first picked, with the seed and lint together, it is called "seed cotton." After it has been ginned it is called "lint cotton," and it is the latter, baled and ready for shipment, which is the cotton of commerce. In very early days the seed was removed by hand, a slow and laborious process, but in 1793 Eli Whitney invented the "cotton gin," since which time the seed has been removed by machinery. The cotton gin, as Whitney invented it, although some improvements have been added, is still the ordinary "saw gin," in use throughout the cotton belt. There is another type, known as the "roller gin," which operated by hand, was known prior to 1793. This is now used only for long staple cotton.

The Saw Gin.—This consists of a cylinder four feet or so long and five or six inches in diameter, on which is a set of circular saws, projecting above the revolving cylinder in series. A mass of seed cotton is brought in contact with the saws while the cylinder is revolving, but separated from the cotton by steel bars or a grating. The teeth of the saws catch the cotton while playing between the bars, which do not allow the seed to pass. Underneath the saws are stiff brushes, which, revolving in the opposite direction on another cylinder, remove the cotton from the teeth, to be blown by a blast of air into a conveyor, and so to the gin box where the bale is built up. Such is the general principle of the gin, as invented by Eli Whitney, and while many improvements have been added, the underlying methods have been little changed since his day.

Modern Gin Houses.—The modern gins all have a suction pipe which pulls the cotton from the wagon placed under it, thus saving labor. Many gins are now two-storied, with an elevator system from the suction pipe into the second floor, whence the cotton is fed into chutes leading to the gin saws. The advantage of the two-story gin is, that more room is afforded for various cleaner devices. The advantages of the one-story gin is that it is cheaper, and when provided with a concrete floor, sometimes cheaper to insure.

Cleaner Devices.—There are two systems of elevator, one pneumatic, and the other a belt distributor, on which the cotton is thrown from the wagon suction pipe. The belt system gives rather a better cleaning, for the cotton is thrown against a wire screen, and then beaten back on the conveyor again, and so to the chute pipes. There is also an automatic feed, so that when the gin stands are filled, the cotton goes into the overflow, and so back on the conveyor and thus gets a second cleaning. This is often of value, so, when ginning special cotton, or when time offers, the cotton is deliberately passed through the overflow. As the season continues, and the cotton as picked contains more and more trash, the double cleaning is of greater value. Another cleaner device is what is known as a "huller breast," which is an attachment used against the saws to remove broken pieces of hull and boll. This is valuable in all low grade cotton, and an absolute necessity with "gathered cotton," or cotton which has been simply gathered up, bolls and all, without any attempt at picking, as is sometimes the case late in the fall with bad weather or a labor shortage. There are many other cleaner devices in use, but the point is that all such devices are of real value, and will pay for themselves many times over in the wet falls, like 1906, 1913 and 1919.

Gin Saws and Speeds.—For years, the ordinary gin saw was ten inches, but lately there is a tendency to use twelve inches, because of their greater capacity at the same rate of speed. The cotton crop must be ginned in about four months, with the bulk of it going through the gins in September, October, and November. Speed is of real importance, but speed must be attained without damage to the cotton. Speeding up the number of revolutions of the saws causes the cotton fibers to be cut, and makes what the trade call "gin cut" cotton, and when the cut is severe enough to affect the value, the damage may be considerable. The ginner must run long hours in the season and he must run fast, but he should take pains not to injure the cotton. Here is the advantage of the twelve-inch saws, for their capacity is greater, and the tendency to excessive speed not so dangerous. The Department of Agriculture advises that ten-inch saws should not exceed 400 revolutions per minute with inch and a sixteenth cotton, and speed must be much reduced with extra staples. The capacity of twelve-inch saws, at the same speed, and without any strain, is about twenty per cent greater. The Department advises that the additional capacity be used by slowing down the speed somewhat and thus further reducing the danger of gin cut.

Seed Conveyed from Gins.—In the newer gins the cotton is removed from the saws by an air blast instead of by the old-time brush. The seed goes from the gin into a conveyor, and is either delivered back to the farmer or, when he sells to the ginner, is sent along to the seed house. The modern conveyors have a cleaner device, a perforated bottom which removes much of the dirt, and some conveyors have a weighing device attached, so that the farmer can be credited with the exact weight of seed from his bale. In many gins without this weighing device there is a custom of averaging the weight of seed, according to the season, character of the cotton ginned, and other factors. Cotton is supposed to "third itself," that is 60 to 66 per cent should be seed, and the balance lint. This thirding is a usual basis for averaging the seed from a bale.

Gin Boxes.—The lint cotton is removed from the saws, either by a brush, or by an air blast, and goes into a condenser, where it receives a final beating and cleaning, and is smoothed out into a bat, which is fed through a flexible tube back and forth across the "gin box," thus building up the bale. The gin box should produce a bale 27x54x45 inches as it comes from the gin, although the dimensions will vary a bit with the amount of gin compression. A cotton bale is covered with mesh fiber "bagging" and fastened together by steel bands called "ties." The character of the bagging has much to do with the good packing of the bale, and the best material for the purpose is jute. There is often an agitation for the use of cotton bagging, to increase the demand for cotton in times of surplus, but this bagging is not so satisfactory, and neither is second hand jute bagging, sometimes shipped back from Manchester, after having been made up again. There has always been complaint of the American cotton bale, and a part of this criticism arises from the use of inferior bagging as a covering by the ginner.

Damage at the Gin.—Cotton can be lowered in value at the gin in several different ways, of which we have mentioned the most important, "gin cut." Since the "cards" at a mill will only accept cotton running very close to even length of fiber, cotton gin cut is always at a discount. Another trouble at the gin is "mixing" different grades and staples in the same bale. In the rush, the ginner will sometimes not wait to entirely finish one bale before starting another. He will estimate the flow of his seed, and raise his breasts just long enough to separate the bales and clean the gin box, before starting in on the next bale. As far as weight goes, his estimate is fairly accurate, but he is not always certain the cotton has all ginned out. The result is that when he starts up again he is ginning some of the first seed, and this may give a mixed bale the next time. Bales mixed in either grade or staple are a loss to the farmer. If mixed in grade, the bale is simply sold on "the low side," irrespective of the percentage of the cotton, while, if mixed in staple, the bale may have to be picked apart, and, in any event will be sold at a sharp discount. Then there is what is known as "gin fall," where the breasts have not been cleaned out, and the accumulated trash falls into the bale. This does not matter so much, because most of the trash will come out in the cleaner devices on the conveyor, or will be taken care of in the "picker room" at the mill, but sometimes the grade is lowered. Fast ginning and dull saws will cause cut seeds to get into the cotton, and such seeds add to the impurities and so tend to lower the grade. In extreme cases, bales are marked down in value because "seedy." Wet cotton will sometimes come through the gin in a stringy condition which makes it difficult to tell it from "machined cotton," or cotton which has been gathered, and then hastily put through cleaning machines to get rid of the boll and leaf. In bad seasons it is often impossible to avoid ginning cotton wet, but it should not be done if conditions permit drying.

Roller Gins.—In this obsolete type of gin, there is no saw at all, but two rollers move against each other in a narrow space, which draws the cotton through but will not allow the seed to pass. In the very early days the roller gin was worked by hand. It is very much slower than the saw gin, and is valuable for ginning long staple cotton, as the danger of gin cut is practically nil. The roller gin at one time was common in the Delta and Sea Island districts, and can now be found in Arizona and California.

Custom Ginning.—Some of the larger plantations own their gins, but, as a rule the ginning of the crop is done on "custom gins," operated by the ginner for a profit. Often the ginner is himself a farmer, and besides ginning his own cotton, rents the facilities of the gin to the surrounding country. The price per bale includes bagging and ties supplied by the ginner and, before 1914, ran from $3.50 to $5 per bale, depending upon the cost of the material used. During the War, the price of bagging and ties and labor all went up, and the cost of ginning in 1920 was as high as $6 to $8 per bale.

Cotton-Seed Products.—The seed is a valuable by-product for the farmer, representing as it does two-thirds of the weight of the seed cotton picked. When he desires to retain seed for his own planting the following year, he makes special arrangements with the ginner, so that the "seed roll" remaining in the gin shall be cleaned out entirely. In this manner he secures his planting seed unmixed with other varieties. As a rule, the farmer is interested in the seed simply for the amount of additional money he will receive from its sale. He can either sell the ginner who may buy for his own account, or buy as an agent for the neighboring cotton seed oil mill. The farmer may elect to store his seed with the ginner, or he may haul it home, or he may haul it direct to the mill which is in any event the ultimate buyer. The price obtained for seed and lint by the producer has varied very much with the different seasons. The bottom of recent years was reached in 1914, when the average was only $17.90 per ton of seed and 7.33 cents per pound of lint cotton. The 1919 figures were $67.18 per ton of seed, and lint cotton 35.36. Prices fell steadily in 1920 going as low as 12.28 cents for lint and $19.83 for seed. In any event, the seed affords the grower a valuable additional compensation.

Cotton-Seed Oil Mills.—These exist all over the South for the purpose of crushing the seed and obtaining the natural oil therein contained. Cotton seed oil is the purest vegetable oil obtainable and has many uses. Refined, and mixed with compound lard, it is the basis of many cooking preparations well known to the housewife, while it is also extensively used in the manufacture of soap, one of the largest manufacturing concerns maintaining their own cotton seed oil mills and their own line of tank cars. The amount of cotton seed oil produced in 1914 was 229,260,000 gallons, and in 1919, 175,250,000 gallons.

Cotton-Seed Cake and Meal.—After the seed is crushed for oil, the residue is known as "cotton seed cake" and is valuable both as fertilizer and as cattle food. As it comes from the mills, it is in sheets and known as cake, but when broken up it is known as "cotton seed meal." It has always been said that the South could with benefit consume more of these products in herself feeding cattle for market. In the meantime, there is a lively export trade in both articles, particularly to the Scandinavian countries, and prior to 1914 Germany was also a free buyer. Another fertilizer and food of a lower grade is made out of cotton seed "hulls," stripped off in process of extracting the oil. The production of cake and meal together in 1914 was 2,648,000 tons, and of hulls, 1,677,000 tons, while in 1919 the production was: meal and cake, 1,1817,285 tons and hulls, 1,143,000 tons.

Cotton Linters.—When the seed is delivered at the mills, there remains adhering to it a short fuzz not removed by the gins. The first process in extracting oil is to remove this fuzz by what are known as "delinting machines." The fuzz is known as "lint" and the 500-pound bales into which it is packed are known in the trade as "linters." These vary in color from gray to green and greenish yellow and sometimes yellow. As a rule, linters are considered to be without staple, although this varies slightly in the case of lint from staple seed, which may have a very short staple. It is never more than a half inch in length and is always weak. It is said that some linters almost white in color have been produced, but they are very rare, if indeed they can be said to exist. The ordinary commercial uses for linters are as batting or wadding material, for stuffing horse collars and mattresses and other such articles; also in a mixture with other material to make felt; to make rope and twine; and for absorbent cotton, where staple is unnecessary and the process of manufacture bleaches and cleans. The best buyers of lint are the mattress people, as almost all cotton and some felt mattresses are stuffed with linters. The linters have always been handled as a side line by the usual cotton merchants, and there are also dealers making a specialty of the trade. Prior to the war, the mills paid little attention to their "cut," simply cleaning the seed sufficiently for their own process, since linters were a decided by-product selling at a few cents per pound, depending upon the crop and the demand.

Munition Linters.—It was always known that the powder people bought lint freely, and every one had heard of "guncotton" without any particular thought of what the basis, or "holding," material for the chemicals might be. As a matter of fact, the word "guncotton" is not in the least misleading, but is entirely descriptive. My own firm had this fact brought very sharply to its attention by a curious incident in the autumn of 1914. We were called by phone one day and asked to explain what was meant by the word "linters," when it appeared that an old coffee exporter, a customer of ours for many years, had received an inquiry from France for cotton linters, and knowing nothing about them, called up our office. In course of conversation, it developed he had an order for some 5,000 bales, and that they must be "suitable for nitration." We obtained samples from Texas and the Valley, had them passed upon by a local authority on chemistry, and had them shipped to New York. The arrangement was that he would provide the freight room, but when we asked the French Line for loading permits, they appeared to know nothing about the matter. Our client told them to call up a certain telephone number, from which conversation they returned to ask how quickly we could get the lighters alongside the ship, and how many additional bales we could get to New York within the next 24 hours, offering to hold the ship, and saying they had a cable from Paris to take all linters they could get on that voyage.

This experience was merely a preliminary to the demand for linters which became such a feature of the war years. Linters, cotton waste, very short staple cotton, cotton cloth cut into threads and then chopped up, any sort of cotton fiber without staple, can be used to "contain" the acids making "nitrocellulose," the base for guncotton, smokeless powder, and high explosives having nitrocellulose as a base. The best material of all is lint, for it has no fibers to be cut up as in the case of other cotton material, and yet is excellent as a container. It was said that one shot from a gun on the British battleship *Queen Elizabeth* consumed 500 pounds of lint. It is needless to say that the demand for linters and the price went up by leaps and bounds. Linters sold as high as eight cents a pound, and this caused the mills to pay close attention to their cut, even to installing new and better machines. The increase in the number of linters produced may be seen from the fact that, whereas the 1914 crop was 15,136,000 bales and the linters 820,000 bales, the 1916 total crop was 12,738,000 bales, of which 1,330,000 bales were linters. In 1914 the mills were cutting not over 75 pounds lint to the ton of seed crushed, while in 1916 the cut was 149 pounds to the ton. The increase in the lint produced, and somewhat more care in buying by the Governments involved, resulted in a reduction in price in early 1917 to about 7 cents a pound. In 1918, after we had been in the War for a year the War Industries Board took over the linter business and agreed to buy all linters produced at 4.67 cents to the pound, the mills to cut 145 pounds "munition type" lint to each ton of seed. After the Armistice, the Government fulfilled its contract and took the linters, but for them they had no use and could find no market, so that a great many bales simply rotted away in the South. For this there has been much unjust criticism of the War Department, because there was no market and the storage would have soon amounted to more than the value. The linter market has been more or less confused ever since, but is now returning to normal. The cut went back to about 65 pounds to the ton, as soon as the Government control was released.

Linters and Cotton Statistics.—The average weight of all cotton bales is 500 pounds and this figure is used in all Government bulletins, estimates and other publications except when otherwise specified. Moreover, all these Governmental estimates include only lint cotton and do not include linters. On the other hand, the so-called "commercial crop'' figures do include linters and are made up from the ''running bales,'' so that, while the average weight of the bales is given, it is never exactly 500 pounds. As a result there is always a difference between the commercial crop and a crop made up on the basis of the 500-pound bale. It is necessary to keep these distinctions in mind, as otherwise cotton statistics may not compare at all with each other.

CHAPTER VI

VALUATION OF AMERICAN COTTON

Three Methods of Valuing Cotton.—There are three factors making up the value of a bale of American cotton, and all three apply to each and every bale. Cotton is sold by the pound, and the price varies, other things being equal, with the grade and the staple. Therefore, each bale must be examined as to grade and staple, and must also be weighed. The weighing includes an inspection of the bale to ascertain if it complies with the usual rules of the trade. So, when we come to the chapter on weights, we shall find it needful to add still another chapter to cover the various kinds of "irregular" cotton.

Definition of Grade.—The grade of a bale of cotton is determined by the color, and by the amount of trash contained in the cotton, such as bits of broken leaf, or boll, pieces of hull, cut seeds, motes, and other impurities. The amount of color in the cotton is very important, and all cotton is divided into "white" and "colored." In white cotton the amount of color must be considered in addition to the trash, for the higher grades require a "bloom," or bright showy color. We shall treat of the off color cotton later on. The actual grading of the cotton is sometimes called "classing," from which it results that "class" is a synonym for grade, and that the man doing the actual grading is called the "classer."

Cotton Standards.—Some forty years or more ago, the cotton trade saw the necessity for some standard of grade, to which all bales could be referred. At a meeting of representatives from all the Exchanges, it was determined to form an organization to be called the "American Cotton Exchange," and to adopt standards of grade for general use. This was done, but, during the lapse of time, scant attention was paid to keeping those standards up, so that shortly there were various different standards all over the belt. The New York Cotton Exchange had adopted the old standards for use in grading cotton delivered on future contracts. The New York Exchange took pains to have the standards checked up each year, so that their official standards closely approximated the old American types. Little attempt was made elsewhere to stick to the standards, much confusion as to grades resulted, and finally in 1910, at the instance of the producers' organizations, Congress passed a law authorizing the Department of Agriculture to make up official standards. These were constructed by a committee representing all groups in the trade in conjunction with the Department experts. These first standards did not meet with universal favor, as they were considered too high in grade. Subsequently, after the passage of the United States Cotton Futures Act, which made the adoption of Government standards compulsory, the standards were modified and were easily accepted by all.

Box of Standards.—A box is made up of a number of samples representing the cotton coming within the grade represented in that particular standard box. Cotton which is doubtful is then matched against the standard for decision as to whether it should be included in that grade. The Government improved the old-fashioned standard boxes. The samples are large and are sewed into the bottom of the box, so that there can be no question of tampering with the cotton. Moreover, as an additional precaution, a photograph of the box is taken, and pasted inside the cover, so that any change would be instantly detected. The only danger is that when the covers are open, dust accumulates slowly on the samples, thus lowering the grade. All standard boxes should be checked up from time to time to make certain the samples properly represent the grade.

List of Grades.—The Government standards provide for the following grades: 1. Middling Fair; 2. Strict Good Middling; 3. Good Middling; 4. Strict Middling; 5. Middling; 6. Strict Low Middling; 7. Low Middling; 8. Strict Good Ordinary; 9. Good Ordinary. The grades preceded by the word "strict" are known as "half" grades in trade custom, although, according to the law, these are all nine to be considered "full" grades. The distinction is not important now, except that you will come across the old term occasionally, and should therefore know the meaning. In the old days, the Exchanges also had "quarter" grades, for the purpose of taking care of doubtful bales, which would not come up to the nearest standard but were too good to be dropped in value all the way down to the next. There was a great fuss made about these quarter grades at one time, and they were dropped by the Exchanges and not recognized by the Government. This makes no vital difference except that the man delivering on contract receives less for his cotton.

Basis Middling.—The fifth grade, that of "middling," is, as the name suggests, supposed to be in the middle of the list, and to represent the average grade of all the cotton. Middling is the price quoted, unless otherwise specified, and if you buy cotton with no specification as to grade you buy a "Basis Middling" contract. All the future contracts, of which we shall have much to say later, are of this character. The value of the cotton up or down from middling is determined in various ways, as we shall see. In the South, staple being omitted, when you buy the "run of the receipts," you take any grade, the difference being figured on or off middling in some predetermined manner. The grades above middling are known as "high grades," and those below middling as "low grades." In the seasons when the weather is wet during the picking time, then the average grade is below middling, and the preponderance of the low grades leads to complications.

Descriptions of Grades.—In white cotton, to quote the language of the Department: "The Official Cotton Standards of the United States require that cotton grading Strict Good Middling or above, be of a bright creamy, or white color, and free from any discoloration." It is needless to add that these very high grades come for the most part only at the beginning of a season. Cotton exposed on the plant for any length of time is lowered in grade, for even exposure to dew will take off that bloom which the Government calls "bright creamy, or white color." Good middling is not quite so clean, but is always bright, showy cotton. Strict middling contains more trash, particularly that fine peppery leaf, which is easy to remove in the picker room. Strict middling is a very favorite grade of the American spinner, because, except for the finest goods, it can be used to the same advantage as the highest grades while the actual loss in cleaning is not large enough to count against the smaller premium. On the other hand, it has become almost an obsession with the spinner to require strict middling, when, in many cases, he could clean the lower grades at less cost than the difference in value between them and strict middling. The basis grade, middling, carries quite a bit of broken boll, leaf, and other trash, but the color is still good, even if not as showy as the high grades.

Low Grades.—Below middling, the bright color is lacking. The cotton becomes what is known as "dead" white, and has often a grayish look. There is also a shade of reddish yellow from time to time, although the color is not pronounced enough to call for a colored mark.

The low grades all carry an increasing amount of trash, until, in good ordinary, it is very considerable.

Variations in Standard.—In theory the standards are never changed and cotton is always classed strictly in accordance with the standard, so that the grades are the same year after year. In practice, there is quite a perceptible difference in certain seasons, when the weather has brought about an undue proportion of the low grades and off-colored cottons. The constant handling of this character of cotton has an effect upon the eye, so that when white cotton does appear, it is rated higher than it really deserves. There is a gradual lowering of all standards in practice during such a season. The classers will deny that this is the case and assert that in their work they stick closely to the permanent standards of grade. As a matter of fact it is almost impossible for them to do so, for their eye is so much affected by constantly looking at low grade and off-colored cotton.

Advantages of Government Standards.—The Government standards have been of real service to the trade. Prior to their adoption, there was a distinct variation in grade throughout the markets. For example, middling in Savannah meant one thing, and in Augusta not one hundred and fifty miles away, meant something entirely different. The merchants were annoyed by these distinctions, but, being well aware of the different gradings at different markets, could protect themselves accordingly. The producer, however, never did understand that middling was not the same thing in different markets, and, logically enough, argued that such a system was both misleading and costly to him. The adoption of the Government Standards has done away with all these troubles, and has made it possible for the farmer to familiarize himself with the different grades so that he can have a better understanding of the value of his own cotton. He can never be an excellent classer, for he has neither the time, nor the need for constant practice, but there is no reason why he should not know in a general way whether the cotton he is offering for sale is middling, or strict middling.

Colored Cottons.—So far, we have considered only white cotton, but, in any season, a certain proportion of the cotton is changed in color by the weather. Frost and moisture are the means by which the color is altered. Frost alone, followed by good weather, will change the color to a light yellowish red to dark red. These are the old-fashioned "tinges" and "stains," and the amount of color determines which the bale should be classed. The color is determined by the frost, and the weather, and the character of the soil. A light frost with clear weather will produce those light creamy tinges, so prized by the trade, because, while the price is lower than white cotton, the expense of bleaching them white is very slight. From this light color we go on down to the deep red stains brought about partly by severe frost, partly by a moderate spell of rain after a frost and partly by a reddish soil blown or washed up into the cotton, and adding its bit to the discoloration. Besides these tinges and stains, we must consider the effect of moisture alone upon the color. The dews will soon cause a slight change in color to a sort of grayish hue, which, as we have seen, is present in the lower grades. To use the trade expression, they "carry" a certain amount of off-color. This slight discoloration is relatively unimportant, and may be ascribed to a sort of mildew. It is the reason why, in order to preserve the grade, cotton should be picked as rapidly as possible. We do have years, however, in which long continued and severe rains visit the belt during the picking season. Such rains injure open cotton very much. Not only is the mildew much increased, but the steady downpour brings down coloring matter from the vegetation of the plant itself. Such cotton is of a grayish, bluish appearance, the color varying a great deal in density. There are bales in which the gray color is just too great to have them classed as white, and there are bales best described by the expression that they are the "color of old blue rags."

New Terms for Colored Cotton.—For a long time, the trade simply called these cottons "blues," and sold them as such and such a grade "blue color," as for example "100 bales Low Middling, off color and blue." The Government wished to make standards for both the old-fashioned tinges and stains, and these blues. They decided to issue standards for "Yellow Tinged" and "Yellow Stained" on the one hand, and "Blue Tinged" and "Blue Stained" on the other. Accordingly, we have to-day both these sets of standards, as follows: Good Middling Yellow Tinged; Strict Middling Yellow Tinged; Middling Yellow Tinged; Strict Low Middling Yellow Tinged; Low Middling Yellow Tinged; Good Middling Yellow Stained; Strict Middling Yellow Stained; Middling Yellow Stained; Good Middling Blue Stained; Strict Middling Blue Stained, and Middling Blue Stained.

In order to keep the yellow tinges and stains from bleaching out, as the cotton will do when exposed to the sun, the Department worked out a system invented by one of their men, Dr. Cobb, to inclose the samples in vacuum glass tubes which preserve the color, and which can, if necessary, be broken and the sample compared direct with the cotton.

Blues are not available for use in the manufacture of certain kinds of goods, as the color will not bleach out successfully. It leaves little yellow dots in the cloth, even when the cloth is dyed, unless the dye be deep in color. Also, as we shall see, the staple is injured. The blues always sell at a sharp discount under white cotton.

It is interesting to note that colored cotton can be produced by breeding seed, and was so produced quite frequently in the old days. Tradition says that such red cotton was "slave cotton," that is to say, it was raised by the slave for his own account, and on such extra time as his master allowed him to use. He could offer this cotton without criticism, but, if found offering white cotton, it was known that it must have been stolen.

Cotton on the Border Line.—It may be imagined that there is cotton which falls very close to the line between white and colored, and this is the fact. Such bales are classed one way or the other, depending upon the amount of color and, also, upon the season, for, in the wet years, the low grade white cottons tend to carry more and more grayish color. If the color be more than a slight deepening of the grayish shade, it must go into the blue, for the reason that the bleaching difficulty will not permit blue bales to get into white marks. On the other hand, bales containing just a suggestion of yellow, or a few reddish spots, can go into white marks. If the color be at all noticeable, a descriptive phrase is added, such as "some light color," or "spotted," or "slightly off-color."

Grading or Classing Cotton—*Samples.*—Before the bale can be classed, a sample of the cotton contained in the bale must be procured. A hole is cut with a knife in the bagging between the bands on top of the bale and near one end, and from a pound and a half to two pounds of cotton is pulled out by hand. This "sample hole" is later recovered with bagging, when the bale is compressed for shipment to the mill. When cotton has been compressed, it is often necessary to take the band off in order to get a sample. Compressed cotton does not give a good sample, because, when first removed from the bale, the cotton lacks "life" and the trash appears unduly prominent. Samples from compressed bales should be left in the sample room, exposed to the air for twenty-four hours, after which the sample will so expand that the cotton appears more natural and the impurities assume their rightful importance. Bales are sampled on both sides, when they are being weighed and inspected for delivery on future contracts, in order to discover "mixes." In ordinary commercial practice, the same result is usually obtained by boring into the bale with an auger bit.

Identification of Bales.—It is necessary that each individual bale and sample should be positively identified, and this is accomplished by means of tags. Every firm has printed its own tags, bearing its name and home address, which tags are fastened with wire to the heads of the bales. Each tag has printed upon it a serial number, and the same number appears upon coupons which can be detached and placed in the samples taken from the bale. When the sample is drawn and sent up to the cotton room for class, the tag number is taken down and the class placed opposite it. Thus, bale 345678 classed as strict middling, can easily be marked up into the proper shipping mark. The gins frequently paint the farmer's initials and number, and sometimes the gin weight, on the bagging. Afterwards, however, every one handling the bale puts his own tag on it. The rule is to remove tags of former owners when handling cotton, but this rule is often not observed, and you can see in a mill yard in New England the factor's, shipper's, and broker's tags still on the bale. By means of the tag number the bale can be found in the sheds, and, for this purpose, the rule is to store bales "tags up and out." Any one who has spent hours crawling around under the red-hot tin roof of a country press hunting bale 345678 can testify this rule is often broken. Sometimes it is necessary to "break out" a dozen bales, up end them to find the tags, and restore them in the line of cotton, before you are able to find the missing bale.

Classing Cotton—*The Actual Work.*—When the cotton has been tagged, and the samples drawn, then comes the actual grading or classing. The staple is determined at the same time, but this is a matter we will take up at length in the next chapter. Cotton can be classed "at the bale" and is often so classed. The better practice, however, is for the samples to be brought up to the classroom, where the classer is not troubled by too bright a light, and where the shadows are not so deep as in a shed. It is very difficult to class cotton properly "in the open," and unless in stress of circumstances, such as haste to make a certain steamer or certain date of shipment, the cotton is usually classed in the room. There the light is steadily the same. Of course, it varies with the sunshine and clouds, but those variations are always the same, and the classer's eye soon becomes accustomed to them. In the shed, the opening or the closing of a door may make a difference in the light, and it is of course different with the position of each bale. A good classroom should have a north light, and, where provided with skylights, the roof should be hipped to keep off the direct rays of the sun. Cotton cannot be classed on very dark, stormy days and cannot be classed by artificial light. These difficulties may be removed in time by modern, scientific lighting. When I was Chairman of the Warehouse and Delivery Committee of the New York Cotton Exchange some ten years ago, the electric light people were anxious for us to experiment with a certain kind of light, and we did so. Opinion varied as to the success of the lights, but they were by no means unsuccessful, and some men appeared to class with them as well as by daylight. Others again were much bothered by the light. We did not dare adopt it at the time, and it was never used except in experimenting, but no doubt it eventually will be perfected.

Cotton classing is an art and not an exact science. That simple sentence should always be remembered, for you will come across a lot of nonsense first and last about the classing of cotton exactly by standard. No two bales of cotton, no two cotton samples, are exactly alike in every particular, and, therefore, absolute matching of standards is impossible. You can approximate the standard, and you must do so in value, but no one can absolutely match two bales of cotton. The cotton classer, if one of the best, is born, not raised, for he has the artist's eye, and that you cannot teach a man. You can teach him the difference between good middling and strict middling, between white and tinged, but you cannot teach him to be a "good judge of cotton." Such a man has the ability to place a bale of cotton instantaneously in its place without reference to either standard or type. He can place the doubtful bales, the samples "on the line," in the proper grade at once, and when the shipment is all laid out, any one will pass those samples without question. It might be thought that good classers are rare, but they are more common than one would suppose. What is rare, is the ability to class cotton, coupled with the ability to merchandize cotton. When the two are combined, then you have one of the men who will make his mark in the trade.

Rapidity of Classing.—In everyday life the cotton must be handled very rapidly, and the classer can seldom spare the time to consult type and standard. A typical office in the South, of which I have figures, handled 95,000 bales before Christmas. That meant the two classers were busy on every clear day from sunup to sundown, from the time light was good until it was so poor they had to stop. The ordinary "bread and butter" cotton was classed as fast as it could be handled, while the staples were handled twice, once by each man, and again re-classed by the staple partner. All shippers pass through some such time of rush each season, and the classer must have the ability to class rapidly and accurately, and must possess the confidence of the firm, so that he is left alone. Otherwise, the classing is not properly done, and poor classing means grade claims, loss of money and loss of prestige.

Liverpool Standards.—The United States Government standards are in use all through this country, but they are not used in the Liverpool market. The original Government Standards adopted in 1910 were not liked by the bulk of the trade, and, as they were optional, a conference of the trade adopted what were known as the "International Standards," which it was hoped would be adopted both in this country and in Europe. In Liverpool these standards were adopted by the Cotton Association, effective September 1, 1916. Meantime the Government Standards were made compulsory by law in this country, having been modified to meet early objections. A comparison follows:

Liverpool		*United States*
Middling Fair	is slightly above	Strict Good Middling
Fully Good Middling	is equal to	Good Middling
Good Middling	is equal to	Strict Middling
Fully Middling	is equal to	Middling
Middling	is slightly above	Strict Low Middling
Fully Low Middling	is equal to	Strict Low Middling
Low Middling	is equal to	Low Middling
Fully Good Ordinary	is equal to	Strict Good Ordinary
Good Ordinary	is slightly above	Good Ordinary

These comparisons and a discussion may be found in "Classification of American Upland Cotton," Farmers' Bulletin No. 802, Department of Agriculture.

1922 Revision of Standards.—Under the authority of the United States Cotton Futures Act, the Secretary of Agriculture called a meeting of a special committee representing all branches of the cotton trade, and this committee revised the United States Government Standards to be effective August 1, 1923. The report of the committee is given in the Department "Service and Regulatory Announcements," No. 72, issued October, 1922. The changes in the standards can best be seen by quoting from this report:

> These changes are designed solely to provide a more satisfactory classification of cotton already within the range of the present standards.
>
> In the white grades the changes are not considerable and the new standards represent the nine grades for which the standards were originally established. The most noticeable changes are in Middling Fair and Strict Good Middling, which in the new boxes are somewhat less creamy and admit a trifle more leaf. The reason for this change is that in the old standards for these grades too large a proportion of creamy cotton was allowed in relation to the lower boxes. Great care has been taken to graduate all of the new boxes so that the steps between the grades shall be as nearly equal as practicable.
>
> The extension of the boll weevil depredations into practically all sections of the cotton belt has caused the greater part of the American crop to show some slight discoloration, known as boll weevil spots. The new white standards provide for such color in the white grades, but do not contain as much heavy spot as bales 3 and 11 of Strict Low Middling, 7 of Low Middling, 5, 6, 8, and 9 of Strict Good Ordinary, or 3 and 7 of Good Ordinary of the old standards.
>
> The old standards for Yellow Tinged Cotton have never received the complete recognition of the cotton trade. The new standards, being much lighter in color, are designed to conform more closely to American trade ideas.
>
> One important objection to the old standard as a whole . . . was the lack of specific designation for cotton intermediate in color between the practical forms. . . . The new standards, therefore, provide for a more exact classification of cotton, the color of which is lighter or deeper . . . than that shown in the practical forms, without multiplication of the practical forms and attendant increase of expense.
>
> The numerical method of grade designation which was introduced in the American Egyptian and Sea Islands standards has been extended to the standards for American Upland Cotton, in keeping with the general policy of the Bureau of Agricultural

Economics (formerly the Bureau of Markets) to employ numbers for the grades of all commodities for which it has established standards, assigning No. 1 to the highest commercial grade and succeeding numbers to the lower grades in order.

The Bureau furnishes a diagram of the new symbols and numbers as follows:

STANDARDS FOR GRADES OF UPLAND COTTON

Blue Stained	*Gray*	White	*Spotted*	Yellow Tinged	*Light Stained*	Yellow Stained
		1 or M.F				
		2 “ S.G.M.		2T		
3B	3G	3 “ G.M.	3Sp	3T	3LS.	3S
4B	4G	4 “ S.M	4Sp	4T	4LS.	4S
5B	5G	5 “ M.	5Sp	5T	5LS.	5S
		6 “ S. L. M.	6Sp	6T		
		7 “ L. M.	7Sp	7T		
		8 “ S.GO.				
		9 “ G. O.				

Grades above the line are deliverable on future contracts, the others are not.

The colors for which no standards are provided are printed in italic.

Selling Cotton by Grade.—The American cotton merchant can sell his cotton in one of three ways, so far as grade is concerned. First he can sell on ‘‘description,’’ that is to say he can name the grade in the contract. Thus, he will offer a hundred bales of ‘‘strict middling, nothing below middling.’’ The grade designated is the United States Government Standard in this country and the Liverpool Standard when selling that market. Second, he can sell equal to a ‘‘type,’’ samples of which have already been furnished the buyer. Third, he can sell on ‘‘actual samples,’’ in which case he guarantees to ship the bales from which the tagged samples shown the buyer were drawn. This method is used more frequently with staple, but it is sometimes used in the case of low grade or colored cotton, over the description of which there might be disagreement.

CHAPTER VII

VALUING COTTON BY STAPLE

Definition of Staple.—Staple is the method of valuing the cotton by the length and strength of the fibers. Both qualities are equally important, because cotton of weak character will not spin out to its full length. In other words, here is a bale of heavy "bender" character, the fibers of which are a full inch and an eighth in length. That bale can be sold for the full length of the fiber and prove most satisfactory at the mill. Here is a bale of weaker character, perhaps "creek" cotton, the fibers of which will pull out to the same length as the bender bale. Yet, when put into the machinery, the cotton will not stand the strain, the fibers break off short of the full inch and an eighth, and trouble and damage are caused the mill. It is obvious the second bale cannot be sold for the same length of staple as the first. Staple, therefore, is made up of two equally important factors, length and strength.

Ascertaining Staple.—The actual operation of estimating the staple of a sample is called by the trade "pulling the staple." The Department of Agriculture gives an excellent description of the process as follows: "A small piece of cotton is grasped with both hands and pulled apart. One half is then discarded, and the ends of the fibers projecting from the portion held usually in the left hand are grasped between the thumb and forefinger of the right hand and drawn from the mass. Two or three such pulls are made and the staple is then lapped back and forth until the fibers are parallel and the ends squared before the length is estimated. The character of the staple, that is its strength, body, drag and uniformity, is noted at the same time."[1] The actual work of pulling staple requires both practice and natural ability. Indeed, the art of pulling staple correctly is decidedly more difficult than that of merely classing cotton for grade. The actual pulling out of the length is difficult in itself, but the importance of correctly estimating the strength makes stapling a most delicate process. The only actual test for staple is to pull "against the rule," that is to say to pull out the fibers and then measure their length against a rule graduated for sixteenths of an inch. It will be seen that this is no test whatever, because the strength is not thereby estimated. Indeed, the staple expert is most scornful of the rule, for this very reason. He knows only too well that cotton will measure lengths at which the fibers will not spin. Judgment of strength is an essential in a staple man.

Standards of Staple.—The question of official standards for staple is a most complicated matter. Not only must the strength be considered, but the preservation of the sample is all important. In grade a standard box must be kept covered, but is not otherwise affected by storage, although even with grade, standards should be checked up every year or so. With staple, however, the matter is far different. Cotton "dries out" easily, that is to say, the sample removed from the bale soon loses the moisture usually to be found in the cotton. That moisture is essential to a correct judgment of the staple, more particularly as to the strength. A sample which has "dried out" may not pull out to the real length of the cotton, it will surely misrepresent the strength. A single illustration will suffice. While I was employed in Arkansas some years ago, the firm found itself unable to secure enough cotton of a certain grade and staple to fill orders already upon its books. I was shipped off to buy cotton in the New Orleans market against those orders, and was instructed to employ a certain broker, an expert as a staple buyer and shipper, to assist me in selecting the cotton. We were most careful in our purchases and considered the cotton excellently chosen, when we received a letter from my employers to the effect that the samples, as received, showed the cotton both weak and short. We could not understand the matter at all, especially when we received the same report on the next shipment, which we had both considered too good for the order. The firm found opportunity to buy a certain lot of cotton in the interior of Arkansas, which "filled them up," and I was ordered home. On arrival, the head classer took me out to the cotton room and showed me the samples of our shipments. The cotton was both short and weak. Some weeks later, on arrival, the mill reported the bales themselves to be entirely satisfactory, which vindicated the New Orleans expert and myself. We caused an investigation to be made by the express company, and it appeared that the package of samples had been caught in a rail blockade, due to high water, and held up some 72 hours. We supposed that the package happened to be next the steam pipes in the car, and so the cotton had dried out badly. This drying out is so well recognized that great pains are taken to keep the humidity of a classroom as nearly even as possible. No heat is allowed, and the moisture is watched nearly as carefully as with a cigar humidor. The reverse is also true, and cotton wetted, or otherwise exposed to excessive moisture, will pick up both length and strength. Of course, the sample is then not a proper representation of the bale. Staple buyers will not look at cotton which feels damp to the touch, nor will they look at cotton in a room they believe to have excessive humidity, whether by fraudulent intent, or by accident.

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[1] Farmers' Bulletin No. 802.

So far then, the Department of Agriculture has not been able to distribute standards for staple, but has promulgated the following rules:

> SECTION 1. The length of the staple of any cotton shall be the normal length by measurement without regard to quality or value, of a typical portion of its fibers under a relative humidity of the atmosphere of 65 per cent and a temperature of 70 degrees Fahrenheit.
>
> SECTION 2. The length of staple of any cotton shall be designated by that one of the following terms, which expresses its measurement in inches or fractions of an inch in accordance with section 1 of this order: Below ¾ inch– ¾– 13/16– ⅞– 15/16– inch– 1 1/32– 1 1/16– 1 3/32– 1⅛– 1 5/32– 1 3/16– 1 7/32– 1¼– 1 9/32– 1 5/16– 1 11/32– 1⅜– 1 13/32– 1 7/16– 1 15/32– 1½– 1 17/32– 1 9/16– 1 19/32– 1⅝– 1 21/32– 1 11/16– 1 23/32; and upwards in like manner in gradations of thirty seconds, disregarding any fraction less than a thirty second.
>
> SECTION 3. The lengths of staple designated as ¾, ⅞, one inch, 1⅛, 1¼, 1⅜, 1½, 1⅝ and 1¾, respectively, are each represented by a sample in the custody of the United States Department of Agriculture in a container marked "Original Official Cotton Standards of the United States Length of Staple," followed by the appropriate designation of such length of staple.

Lengths above an inch and three-eighths are almost certainly from either Sea Island or American-Egyptian cotton.

Pulling Staple.—In short cotton, such as Atlantic Uplands, the staple is pulled very quickly, just enough attention being given to the matter to make certain the bale is seven-eighths of an inch. In the Gulf and Valley the staple is ascertained very rapidly on bales below an inch and an eighth in length. Those bales of that length and over are handled very carefully, for the differences in value are large. It is customary to class the cotton out rapidly in the shorter lengths, and to put aside the longer for two and possibly three examinations for staple, before they are finally placed for value. Often the firm has a "staple partner" who looks over every bale in a mark for staple of an eighth or over, after the classer is through, and before the cotton is shipped. This partner will also pay general attention to the staple of all cotton handled. It is costly to pay claims for staple, and it is equally expensive not to secure full value.

Selling by Staple.—Cotton is sold by staple in the same manner as with grade. First, the bales may be sold on description, as for example, "Inch and a sixteenth rivers," or "inch and a sixteenth creeks," and so on. Second, cotton may be sold as equal to a certain type. In this case the type samples are sent to the buyer early in the season, are pulled by him, and he ascertains exactly what the cotton will be. These types run in certain marks for years, but fresh samples are usually sent to the broker or mill each year. It is well understood that the type will dry out, and therefore become more or less unsatisfactory as to staple. Third, cotton is sold for staple on actual samples. This is the more common method on all "extra staples," or cotton over an inch and an eighth. The difference in value is so great that neither the seller, nor the buyer, cares to run the risk of mistake. The actual tagged samples are sent to the broker or mill, he picks out the bales he desires, and they are shipped him.

Grade and Staple Together.—Except in the case of sales by actual sample, both the grade and the staple are specified in offers, sales, and shipments. Thus, a mill does not buy simply "strict middling," but "strict middling inch and a sixteenth rivers," and so on. In the same manner the type represents both grade and staple. Sometimes a type mark, as for example RERO, will represent the staple only, and the grade will be specified, as so many bales "strict middling, equal type RERO." Often the type is plainly marked "good middling RERO" or "strict middling RERO," and so on. In any event both the grade and staple are specified in the sale note. In the case of actual samples this is not always done but the shipper is asked to submit samples for "25 bales strict middling inch and three-sixteenths." He sends the samples tagged, but all he guarantees is that the actual bales selected from those samples will be shipped by the numbers furnished him.

Staple and Seed, or Soil.—Primarily the seed planted determines the staple, for you cannot secure long fiber cotton from short staple seed. Secondarily, the soil is of importance. This must be of a rich character, and in former years it was thought it must also be of a rich alluvial character, such as is found in the bottoms. It was thought impossible to grow long and strong cotton on upland soil. The Department of Agriculture has done a great deal of work in developing long staple seed for upland soils, and, provided the soil be rich and not sandy or barren, long staple cotton can be raised in the uplands to-day.

Staple and Weather.—Granted the seed and the soil, we have remaining the matter of weather. Hot and moist weather is ideal for the development of staple, one reason why the humid climate of the Valley is so excellent for growing long fiber cotton. Such weather conditions are likewise ideal for weevil, which accounts for the reduction in the Valley staple crop. On the other hand, long continued dry weather is bad for the staple, since it dries out the natural oil in the plant, leaving the fibers weak and brittle. In a drought year, like 1918, the Texas and Oklahoma crop is all of staple inferior to the usual run. Such cotton is sometimes called "immature staple," and the term is applied also to cotton "gathered" from bolls not yet matured. A spell of long continued wet weather in the fall, with the cotton open on the plants, will damage the staple. The seed sprouts in the boll, the cotton is blown about and continuously water soaked, until it becomes half rotten. Such cotton is called "perished staple."

Differences in Value Grades.—The differences in value between the various grades vary with the season and with the conditions. They are best shown by a table, giving the differences "on" and "off" middling for delivery on New York contracts for future delivery:

Differences in Value Grade[1]

Grade	Nov., 1903	Nov., 1906	Nov., 1907	Nov., 1913	Nov., 1915	Nov., 1916	Nov., 1917	Nov., 1918	Nov., 1919	Nov., 1920	Nov., 1921
St. Gd. Mid.	62 on	100 on	75 on	90 on	73 on	56 on	62 on	121 on	315 on	243 on	225 on
Good Mid.	44 "	76 "	50 "	65 "	48 "	34 "	43 "	86 "	153 "	183 "	175 "
Strict Mid.	22 "	38 "	25 "	32 "	24 "	18 "	22 "	46 "	85 "	98 "	110 "
MIDDLING	Basis	Basis	Basis	Basis	Basis	Basis	Basis	Basis	Basis	Basis	Basis
St. Low Mid. ...	14 off	14 off	30 off	50 off	46 off	27 "	29 off	115 off	188 off	218 off	93 off
Low Mid.	38 "	50 "	100 "	125 "	99 "	66 "	73 "	326 "	480 "	488 "	220 "
St. Gd. Ord.	72 "	90"	150 "	200 "	158 "	111 "	123 "	526 "	*778 "	*720 "	348 "
Good Ord.	100 "	125 "	200 "	300 "	217 "	157 "	171 "	696 "	*1023 "	*923 "	450 "
Gd. Md. Tinged..	Even	Even	Even	Even	1 on	Even	2 on	53 "	182 "	123 "	48 "
Str. Mid. Tinged.	6 off	6 off	20 off	20 off	22 off	21 off	19 off	108 "	289 "	218 "	138 "
Middling Tinged.	12 "	12 "	30 "	40 "	50 "	43 "	42 "	180 "	432 "	385 "	238 "
Middling Stained	50 "	90 "	125 "	125 "	112 "	95 "	96 "	398 "	*696 "	*630 "	420 "
Mid. Blue Stain..	....	....	....	....	84 "	115 "	113 "	500 "	*784 "	*715 "	455 "

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[1] The differences are in "points." We shall give a more complete explanation of the points in the chapter on the future contracts. It will suffice here to note that a point is one one-hundredth of a cent (.01) per pound.

Prior to 1914 the differences were made up by the Revision Committee of the New York Cotton Exchange, meeting twice a year, in September and November, the differences running unchanged until the next revision date. For this reason November has been selected for comparative purposes.

After 1914 the differences were made up on the "averages" of ten southern markets designated by the Secretary of Agriculture in accordance with the United States Cotton Futures Act. The system is fully explained in a later chapter dealing with the law.

In March, 1919, an amendment to the law was passed limiting the grades deliverable on future contracts to low middling. Therefore, in November, 1919, and thereafter, grades with the prefixed (*) were not deliverable on future contracts. The differences "off middling" were still made up on the averages, and are quoted here for comparison.

Grade Differences.—We have said that a "point" is one one-hundredth of a cent per pound. The average bale of cotton is supposed to weigh 500 pounds, so that a fluctuation in value of one one-hundredth of a cent per pound will amount to five cents per bale. If you will bear that in mind, you will see by a glance at the tables that the actual value of the cotton can be much changed by the grade. It will also appear that careful classing of cotton is essential to avoid heavy loss.

It will be noticed that there has been a steady widening of the differences off middling on the lower grades ever since 1903. There are various reasons for this change in value. In the first place, a severe storm in 1906 brought a great surplus of low grades and a scarcity of high grades at a time when business was active, and when the merchants in the South had sold forward a great quantity of the better cotton. To secure that cotton they were compelled to pay very high prices, while the actual supply in bales, in quantity but not in quality, was large. These low grades were offered for delivery on future contracts, so that the relation between the better class of cotton and the "basis middling" future contract was much disturbed. Heavy losses resulted from this circumstance and much blame was ascribed to the New York revision committee for not widening the low grade differences in 1906. Undoubtedly that committee was guilty of an error of judgment, although at the time they had no information to show that any such surplus of low grades would result, and although the situation was made worse by rains after the date of meeting. In any event, great indignation resulted, and the feeling was seized upon by the politicians and agitators to gain popularity. The result was that an economic problem of a delicate nature was roughly thrown into the political battlefield. We shall later have to take up in detail the legislation and the results thus brought about, but it is sufficient to remark here that so much was said for so many years about the undesirability of low grade cotton, that even the farmer has come to believe it somehow worthless. As a matter of fact the actual spinning value of the lower grades is far above the differences prevailing in 1919 and 1920, which mark the culmination of the movement. These very wide discounts were brought about by a succession of crops of indifferent quality, followed by a low grade crop in 1919, and by the general unsettlement due to the war inflation when everything abnormal was exaggerated. There has since been a swing back in the market value of low cotton, and what is far more important, there has been a change in the feeling South. The evil experiences of 1920 were much increased by the low grade cotton, whose value had been marked down to almost nothing. It is probable we have seen the worst of the misdirected agitation against the lower grades, and that we are returning to a more sane comprehension of their value. This whole question has had much to do with the relation between spot cotton and futures and will require that we later take it up in detail.

Staple Differences.—Here we have had a steady increase in the premium paid for the extra lengths of staple. So much has this been the case that, to-day, cotton an inch and an eighth long is regarded as a specialty, whereas twenty years ago it was offered on description, or on type, as is any short cotton to-day. This change in value has been due to a curtailment in the supply because of the boll weevil, and also to an increase in the demand. The use of the automobile has resulted in a great demand for rubber tires, and the "fabric" of those tires is best made of extra strong cotton yarn, which in turn is made of extra staple cotton. The result has been that, at the very time the supply of long staple cotton was being reduced, an entirely new demand had appeared. In part, the problem has been solved by an advance in premium, and in part by the production of long staple cotton in Arizona and California. This cotton is not always liked by the fine goods people, but it is in good demand from mills making "tire yarns." The premiums reached their apex in 1920, and fell off rapidly thereafter, because of the panic and the consequent curtailment in the demand for tire yarns. The probability is that the premium will advance again as business returns to normal. The future depends upon the increase in the staple crop in the old cotton belt, when and as weevil control is successful, and also upon the increase in the long staple production in the Far West.

AVERAGE PREMIUM FOR STRICT MIDDLING DELTA COTTON, 1913–16

(U. S. Department of Agriculture figures, based on price of strict middling short cotton, same crop)

1⅛ cotton had a premium of 150 points
1 3/16 " " " 275 "
1¼ " " " 400 "
1 5/16 " " " 525 "
1⅜ " " " 675 "
1 7/16 " " " 750 "
1½ " " " 900 "

New York *Evening Sun* quotations, based on middling short staple, 40.25 at New Orleans and 42c. at Memphis, May 8, 1920; and 11.88 at New Orleans, and 11.25 at Memphis on May 7, 1921:

	Memphis		New Orleans	
Staple	1920	1921	1920	1921
1 1/16	600 points	50 points	625 points	100 points
1⅛	2,600 "	350 "	2,425 "	200 "
1 3/16	4,000 "	650 "	4,200 "	525 "
1¼	4,600 "	Nominal	3,550 "	800 "
1 5/16	5,000 "	"	Nominal	Nominal
1⅜	5,800 "	"	"	"

Sea Island at Savannah No. 2 was $1.15 a pound, May, 1920, and about 40 to 42 cents per pound in May, 1921.

CHAPTER VIII

VALUING COTTON BY WEIGHT

The Cotton Bale.—As the bale comes from the gin, the package is an irregular rectangle about 27 x 54 x 46 inches, covered with open mesh bagging, and held together by six steel bands or "ties." The average weight of a bale of cotton is supposed to be 500 pounds, and while that average is not correct, the figures are close enough for all ready figuring. Cotton is sold by the pound, so that every bale is carefully weighed by every one who handles it. The original gin weight is often painted on the bale along with the farmer's initials, or farm mark, but, thereafter, the weight is kept in books at the office of the firm owning the bale, the tag affording a means of identification as in the case of the sample.

Selling by Weight.—The weight of the bale will vary from 300 to 700 pounds. Bales below 300 pounds carry a penalty as "light weight," while the very heavy bales are rare, being, for the most part, confined to those counties where a levee tax is placed upon each bale, irrespective of weight. In order that a sale of 100 bales shall always carry approximately the same amount of cotton, the rules of the New England "mill terms" require that a sale of 100 bales shall be 50,000 pounds, with a variation on the invoice weight of not over two per cent. That rule has nothing to do with the requirement that the arrival weight at the mill shall equal the invoice weight, the two per cent rule is simply to protect the buyer against shipment of light weight bales in case of an advancing market, or heavy weight bales in case of a declining market.

Weighing Cotton.—In the South all cotton is weighed with a tripod, a beam and a pea. The bale is raised from the ground by grappling hooks, and held suspended from the tripod, while the "pea," or weight, is slid along the arm, or "beam," until it balances. Cotton is weighed with a "rising beam," that is to say, after the balance is reached the pea is pushed back a pound or two, so that the beam is not level, but rising slightly. The weight is then read off from the notch in which the pea is resting. The precaution of the rising beam is for the purpose of allowing for the drying out of the moisture in the cotton, and is particularly necessary with the first pickings or, as they are called, with "green cotton." In a dry store all cotton will lose weight slowly, and in the New York market, for example, an allowance of one-half pound per bale per month is made for such shrinkage. Cows will eat into a bale of new cotton, making a large hole in one side. The result is a loss of weight from the gin figures, and this is covered by the notation "*C. E.*," or "*cow eaten.*" No penalty is attached to such bales, aside from loss in weight.

Wet Cotton.—The bales may come to the scales "wet," either from exposure to rain on the platform of the country station, or from being hauled into town in the rain from the gin, or from half a dozen different reasons which may account for the bales being wet. If the dampness is plainly on the surface, so that the cotton can dry out, the buyers' weigher will accept the bales, but will require an allowance for the additional weight of the moisture. Cotton is usually weighed out by the representative of the seller to the weighmaster of the buyer, called the "reweigher" and when there is a question of wet, the two get together and decide the amount to be "docked." The reweigher is held responsible for subsequent loss in weight, and he, therefore, will take all the dockage on wet cotton he can get, as a matter of self-protection. The farmer loses any amount deducted above the actual moisture in the cotton, but, if he is so abominably careless with valuable property as not even to cover the bales with a tarpaulin, he cannot reasonably complain when he pays the inevitable bill of carelessness.

Country Damage.—If cotton is left out in the open exposed to all sorts of weather, the outside of the bale will begin to rot, and this rot will extend back slowly into the heart of the bale. Moreover, if the cotton is not "skidded" off the ground, the mud is washed on the lower side of the bale, and cakes up there with the result that underneath this caked mud, the bale begins to rot away. This is called "country damage" and is a costly matter, for such bales have to be stripped of their bagging and ties, and the rotted cotton picked away by hand, until the bale can be safely shipped. This "reconditioning" must be thoroughly done, because if any rot be left, the trouble will start up the instant the bale gets damp, and more damage will result. The loss on bales with "country damage" is large, because, not only is the loss in weight heavy, but the labor cost is high. Most country damage originates right on the farm, and most of the resulting loss falls right on the farmer. It is inexcusable, because "skidding" the bales off the ground, covering them over with boards, or tarpaulins, or any semi-waterproof contrivance, will obviate most of the country damage. Yet the traveler through the South will observe farm after farm with one to three bales of cotton dumped out in the front yard, covered with mud, and soaking wet. In the meantime, he will read editorials upon the advantage of the farmer "holding" his cotton. If he holds it in this manner, any possible improvement in price is lost through country damage.

Country damage will also occur in the warehouses at small country points where the cotton is carelessly placed outside the shed roof, or in times of "block," dumped in a nearby field. This loss falls upon the owner who need not be the grower. The losses on this account have been so heavy in recent years, that the handlers of cotton now take a much more active interest in the doings of their local warehouse men, so that this sort of country damage is not so prevalent as it used to be.

As an illustration of the necessity of thoroughly reconditioning cotton, and of the ease with which cotton once damaged will damage again, a personal experience may be of interest. While I was in Arkansas, it became necessary to make a hurried shipment to Liverpool, at a time when the regular reweigher was ill. I was ordered down to the press to ship the cotton, and instructed to see that the bales were thoroughly reconditioned as we were aware the cotton was country damaged. In fact, the cotton had been bought with the understanding the weight would be settled after the bales were "picked." My gang of compress negroes picked damage off that cotton so thoroughly that the country owner objected very much to the bill. The cotton was pressed, marked and shipped, and we thought no more about it. As luck would have it, I happened to be in Liverpool, some six weeks later, when the cotton arrived, and heard the merchant receiving the shipment, complain very much of the country damage on the bales. His reweigher said there was at least 15 pounds damage on the average, and offered to show me. So we went down to the docks where the cotton was being unloaded, and he was quite correct. I cabled back to Arkansas, they traced that shipment, and it developed that the railroad had missed a steamer at the port, had been short of cars, had unloaded the cotton and left it in the open air for a couple of days, until the next ship arrived. It rained hard both days, and the cotton damaged all over again. Thanks to the remarkable coincidence that the man who attended to the shipment was present himself at the unloading in Liverpool, we had a clear case against the railroad, and they had to pay the damage claim.

Water Pack.—This is another case of much the same sort of damage. A bale will stand under a leak in the shed roof, so that the water runs down on the same spot for days; or, at the gin, a leak will allow steam into the gin box at just one point; or, in some other manner, a small part of the bale, usually the head, will be exposed to water for some length of time. The cotton in that portion of the bale will rot, caking up in sheets as stiff as cardboard, and smelling just like rotten eggs. This is called "water pack" and, as is the case with country damage, the bale must be stripped and the damaged cotton picked away. The shed negroes get quite expert at "smelling" water pack, and I recall one old time darky who used to go down a line of cotton with his nose in the air, remarking "Ah suah can smell water pack, boss, Ah suah can."

Loss in Weight Claims.—These are one of the botherations of the business, and exist all along the line from the gin to the mill. In the South there is not much trouble because both sides settle their difficulties right over the bale. When the receiver is in Europe or the East, and the shipper is in the South, the matter is not so simple. Liverpool now has a system of "mutual allowances," that is, the shipper is credited with any gain in weight, and debited with any loss in weight, and the net result of his shipments is all he has to settle. Where this system does not prevail, and the shipper is billed when a loss is incurred on one lot, and hears nothing about a gain on another lot, then various things happen. If the claims are not large, the shipper usually pays the bill and says nothing, at least not in public. When the claims always appear, the shipper feels himself justified in resorting to a bit of sharp practice on his side, and he "adds" to his weight sheets, by increasing the actual weight of each bale one, two, three pounds or some other specified amount. Some shippers add enough so that every bale appears to weigh either an amount ending with "5" or an amount ending with "0." It is an interesting commentary on the footless character of all sharp dealing, that when the mill is suspected of underweighing, the shipper adds to his weights to take up the claim; while, on the other hand, the mill will justify the claim by the statement that the weights were "added." The net result is approximately the same as though neither had done anything except use the actual weight of the cotton. On the other hand, the door is opened for all sorts of chicanery, much bitterness on both sides, and a general lowering of business standards. The fairest methods with weight claims are the safest, and the system of "mutual allowances" comes near to being the fairest.

Controlling Cotton.—In case of excessive loss of weight the rules of the New England Cotton Buyers' Association provide that the shipper shall be notified that he may attend a second re-weighing and ascertain for himself the actual weight of his shipment. As the shipper is often South, there has grown up a custom of employing firms to represent him both at the re-weighing and at the re-sampling, in case there is a grade claim. This is called "controlling cotton" and the firms attending to the business are called "controllers." There are firms of controllers who do business in Europe also, and will represent the American shipper in all the ports and markets of the Continent.

Tare.—Another matter connected with the weight of cotton is the question of tare. In the New England terms, the tare allowed is 4.8 per cent of the invoice weight, in other words, the bagging and ties must not exceed that percentage of the invoice weight. In case excessive tare is suspected the bales are stripped, and the bagging and ties carefully weighed up and the tare ascertained. Once more the controller is employed to represent the shipper. Cotton is sold in this country on the "gross weight," but in Great Britain and on the Continent, cotton is sold "net weight." On all Liverpool shipments, six per cent of the invoice weight is deducted for "tare." If the hundred bales of cotton weighs 50,000 pounds, the amount billed to Liverpool will be 47,000 pounds, some 3,000 pounds or 6 per cent being deducted for the tare. Cotton is said to be sold Liverpool "cif and six," that is to say, "cost, insurance, freight, and six per cent tare."

Patching.—When the bale comes to the compress to be pressed for shipment, the sample holes are open, and, if the bale has been often handled, the sample hole is a great jagged tear in the bagging. It is essential that these holes be covered, and so, in pressing, a piece of bagging is placed over the tear in the bale's covering. These pieces of extra bagging are known as "patches," and it is obvious that, while necessary, they lend themselves to much chicanery in the line of adding more bagging than is requisite and thus increasing the shipping weight. Some misinformed people assert that patching is an unmitigated evil, but this is far from the truth. Patching is necessary and proper, and where the rules are followed no objection can be taken to the practice. As an illustration of what is proper patching, we will cite the fact that the Memphis Cotton Exchange rules limit the patch in all cases to five pounds, and that as a matter of fact the actual patch at the Memphis compress runs from two pounds to five.

Compressing.—Before cotton is shipped out of the South, the bales are compressed in order to save space. In the very old days before the Civil War, cotton used to be "screwed" into sailing vessels, the pressing taking place in this manner in the very hold of the ship. In modern times, the compressing is done at regular steam or hydraulic presses, located at storage plants all over the South. As the bale comes from the gin it is called "big cotton," and such a bale will measure about 27x54x46 inches. This is the so-called "standard gin box," and the carriers have a penalty on cotton which exceeds these measurements. The density of pressure in the ordinary press is from 25 to 29 pounds to the hundredweight, while the rules of the railroads and steamship lines require that the pressure be at least 22½ pounds, shipside, guaranteed. Such compressing reduces the bale to 28-29 inches wide, 58-59 inches long, and 18-20 inches thick. This is called "flat cotton," and it is these compressed bales which are to be seen loaded on trucks, passing through the streets of northern cities, or being unloaded from the steamer at the European port. The railroad pays the charge for compressing, 20 cents a hundred pounds, and figures it into the freight rate.

Shipping Marks.—When the bale comes from the press, it is marked for identification with a "shipping mark," which is placed upon all the bales going out in one lot. The usual custom is to have four letter shipping marks, as for example "BIRD" or "SNOW," and the bill of lading, which the shipper obtains from the railroad, will call for that particular shipping mark. The usual form reads "Received of Jones and Co. one hundred (100) Bales cotton, weighing 50,610 pounds, marked BIRD," or whatever the mark may be. There is also a "brand" placed upon the head of the bale, which is a sort of a trade mark for the shipper. Sometimes the buyer requires that the shipper put the brand of the buyer upon the bales instead of his own. When the cotton is branded, the lading will read "one hundred (100) bales cotton, weighing 50,610 pounds, marked BIRD, branded HUB" or whatever the brand may be. The idea is that while there may be several marks of BIRD in transit at once and so the bales may get mixed at some transfer point, it is impossible to have another 100 BIRD with the brand HUB on the head, because that is the shipper's own private mark. Some firms have an elaborate system of "drop" letters or figures, placed just below the mark, so that they can tell simply by looking at the bale, what grade and staple the shipment is supposed to be. These marks are also added in the bill of lading, as for example "BIRD with a drop S."

Actual Compressing.—It is quite a sight to see a press at work in the rush season, when every minute counts, and the cotton is going through better than a bale a minute. A gang of negroes out in the sheds is "breaking" the cotton out, and as fast as the bales are thrown in the gangway between the rows, a set of truckers picks them up, and rushes them to the press itself. Here another set of shouting negroes seizes the bales, "busts" the bands open with a band breaker, throws them into the press, adjusts the sample patch, replaces bagging too badly torn, shoves the bands through under the bale, and away goes the press. All cotton compresses work up, instead of down, and there is a little puff of steam, each time the plunger goes up with a bale. When it comes down again, the bands are tied, the bales dumped on another truck, stopping for an instant to be marked and branded by the negroes holding the stencils, and rushed off to the cars. A white checker stands by, counting off the bales, and making certain that, after a hundred BIRD have been marked up, that the stencil is changed to DUPE, or whatever the next mark may be. With a good gang, it takes much less time to perform these various operations than it does to write about them, and the shouts and laughter of the negroes, the rattle of the trucks, the puff of the press, and the snorting of the switch engines, all form a combination of orderly disorder, both fascinating and inspiring, provided you do not have to check the bales as they slip past you.

Loading.—The negro with the truck will start down the inclined platform on the run, then placing the handles of his truck on the ground, slide down the boards, and right into the car door, jumping up and pushing his bale off with one movement. There is another checker to see how many bales are put in each car. The railroads require that at least 75 bales be loaded into a standard 36-foot box car, while with automobile and furniture cars, 100 to 150 bales are loaded, depending upon the capacity of the car, as stenciled upon the outside. The regulations require six bands to the bale on domestic cotton, unless the bale be unusually large, but all "export cotton" must have at least eight bands to the bale. You can tell the destination of cotton in a freight house, simply by counting the bands.

High Density Cotton.—There has long been a desire on the part of the carriers to get a bale more compactly compressed, both because such a bale takes up less room, and because the tighter the package, the less the damage from hooks. During the War the scarcity of freight room enabled the steamship people to insist upon a greater compression. They wanted a bale compressed 34 pounds to the hundredweight, instead of the usual 22½. Presses were built at the ports, and some of the larger interior points, to turn out this "high density" cotton. Such bales commanded a premium because they were available immediately for shipment, whenever freight room could be secured. After the War the steamship people made a preferential rate for such cotton, so that high density bales still command a small premium.

Round Bales; Gin Compress.—There has always been much complaint of the American cotton bale, and the torn, ragged, dirty appearing bales which can be seen trailing through the streets of northern cities en route from one steamer to another, or from the carrier to the mill, lend color to the assertion that the package is most wasteful.

Many remedies have been suggested, two of which we need to consider. The first was the so-called "round bale," a package made by tightly rolling the cotton around a cylinder. These bales are still made, but the round bale did not meet with favor. The package was tight, but it was very difficult to get a satisfactory sample. The merchants did not like to handle such bales because, being round, they would not pack as well in cars and sheds, and, finally, the company was unable to overcome the silent opposition exercised by the capital already invested in the old style compress. A recent idea is "compressing at the gin," the bale being compressed for shipment at the time it is ginned. The sample objection holds against this system, unless the cotton can at once be shipped. It is difficult to sample a compressed bale without removing a band, and when that is done, the cotton flies out at that point, the band is never properly replaced, and the package is worse than ever. The marketing side of the "gin compress" we will take up in a later chapter.

The truth is that the package, torn and ragged as it appears, is not so wasteful as would seem. The bale leaves the compress in the South in good condition, when jute bagging is used, and the damage comes later from handling in transit. There is waste, no doubt, but the question remains whether this waste is greater than the expense of a different package. The Egyptian bale is the example usually cited, but labor is cheaper in Egypt, and long staple cotton is much more valuable. Thoroughly to cover the American bale with several wrappings of bagging, as is done with the Egyptian, would cost money. It is quite possible it would cost more than the apparent waste. This is quite aside from the proper handling of cotton in transit, for the unnecessary exposure of American cotton to weather is an economic waste which begins with the farmer and ends with the mill.

CHAPTER IX

UNMERCHANTABLE COTTON

Definition of Unmerchantable Cotton.—The term needs careful definition, for the politicians have so used the phrase in connection with their agitation against the grades below middling, that they have obscured the real meaning. In a strict sense of the words no cotton is unmerchantable, because all cotton can be sold for some purpose. The trade intend to indicate cotton out of the ordinary run of the bales when they use the term ''unmerchantable.'' As a contradiction of the words ''unmerchantable cotton,'' the trade will often refer to the ordinary run of the bales as ''straight cotton.'' There are various forms of unmerchantable cotton to be considered.

Mixed Packs.—These are bales containing more than one grade or staple. We have seen that the ginner may produce a ''mix'' by not stopping long enough between bales thoroughly to clean out the seed. Another cause is plain ignorance on the part of some negro farmer who insists he must have his own bale, irrespective of the fact that he has not enough cotton of one grade to make a bale, and that, if he has his load ginned into one bale, it will inevitably be a mixture of higher cotton from a first picking and low cotton from the recent picking. A conscientious ginner will do his best to get such farmers to combine their grades so mixed packs will not appear, but, sometimes he cannot persuade them not to gin all their own cotton together, and sometimes the ginner simply does not care. Still another cause is careless handling of the seed in the seed house before going to the gin. Mixed packs are almost always discovered at the first moment they are handled and the loss then falls immediately upon the farmer. As the bale is classed upon the low side, irrespective of the proportion of good cotton in the bale, the penalty for the farmer's carelessness may prove severe. In the case of mixed staple, the loss may be even greater, because if the mix is bad enough, the bale will have to be separated and repacked. When mixed pack bales are discovered, a sample of both sides is taken, and the cotton is tied together with a string, and thus sent up to the classroom, so that the classer is instantly aware that he has a mixed packed bale with which to deal.

Sand Packs and Dust Packs.—We have already mentioned water packs and country damaged bales which are simply reconditioned and are then straight cotton again. Dust and sand packs are bales which contain so large an amount of sand and dust mixed with the cotton that they are dangerous to put into mill machinery. Not only will the sand and dust do damage to the machinery, but there is also danger of a spark being struck, which will cause a bad fire. Sand and dust packs come in falls with some days or weeks of high winds or severe storms, when the cotton is open in the bolls, so that either sand or dust is blown into the cotton, depending upon the character of the soil. These bales have to be taken down, the sand and the dust removed and the bales rebuilt again before they are merchantable.

Inferiors.—Cotton below the grade of Good Ordinary is regarded as "inferior" and is usually sold to the mattress people for stuffing or to waste concerns, which clean it for various purposes.

City Crop.—This is rebaled samples swept up from the floors of classrooms and from the warehouses, where the bales are sampled. This is sometimes called "loose cotton,'' and is carefully preserved and sewed up in great burlap ''snakes,'' and sold to waste dealers. As some of this cotton may be high grade and good staple, there are firms in the large Southern markets which make a business of going over this loose cotton, picking out approximately the same grade and staple, rebaling it and selling the cotton as ''repacks.''

Gathered Cotton; Snaps; Bollies; Machined Cotton.—In Oklahoma and Texas, when labor is short, the cotton is ''gathered,'' that is, the plants are simply cut down and brought in, open bolls, unopened bolls, and all. In the seed house, the open cotton is pulled out and ginned in the usual manner, while the unopened and half opened bolls are sent on to the gins, where special machinery is installed to break open the bolls and gin out the cotton. In the early days the result was the most fearful looking mess, known as ''bollies'' or sometimes as ''snaps'' and sold for a few cents a pound. The process of cleaning has been so much improved that, to-day, it is possible to get good results, so much so, that at times it is very difficult to tell this ''machined'' cotton from that picked and ginned in the usual manner. The regular picked cotton of low grade is sometimes put through the machines to be raised in grade by cleaning. Machined cotton is not ''regular,'' for the reason that care is not taken to keep the half open bolls with immature cotton separate from the matured bolls, so that the staple gets mixed, breaks off in the mill machinery, and thereby causes loss. The most objectionable bales are easy to detect, for the cotton has a sort of half spun appearance, and breaks off in the fingers, when the staple is pulled. The trouble lies with the bales just ''on the line,'' with the bulk of the cotton satisfactory, so that they get by and are later found in the process of manufacture. There is a rule in the future contract, and in the law for that matter, prohibiting the delivery of machined cotton.'' It is probable that the improvement in the cleaning machinery will bring more care in the selection of the bolls to go through the machines, so that the weaker staple will be put into bales by itself. It has been proposed that all machined bales be marked at the gin, but the objection has always been raised that it was unfair so to penalize the farmer who put his regular low grades through the cleaning machines.

Fraudulent Cotton.—Almost any sort of irregular cotton can be produced by fraud. Mixed pack bales with a layer of good cotton on the outside are known as ''plated.'' It is possible the ginner may accidentally plate a bale by too rapid ginning, so that the seed of high grade cotton is left in and ginned out ahead of a low grade bale, making a plate, or layer, on the outside of the bale. This is sometimes done fraudulently, with the plate all around the bale, so that it can be sold for high grade, or long staple cotton, when the interior is actually inferior in both grade and staple. Such plated bales are usually detected by boring into the head or end with an auger bit. It is also frequently the case that attempts are made to add weight to the bales in a fraudulent manner. Water packs are sometimes made deliberately at the gin, by adding water up in the head of the bale, where it is less likely to be detected. Bales are sometimes ''skidded'' over running water all night to pick up additional moisture, and other similar tricks are attempted. A vigilant and efficient ''reweigher'' will catch most of these bales, and when he does, the dockage is usually greater than the water that has been added. There are also many stories of foreign substances being hidden in the bale to add to the weight. One of the most pleasing of these tales is that of the anvil hidden in the bale by the farmer. This was found at the mill in Manchester, shipped back to the merchant with a loss in weight claim, returned by him to the country merchant who sent it back to the farmer hidden in a barrel of flour. As a matter of fact, these stories are all most unlikely to be true, owing to the probability of detection at the compress. I recall once seeing a bale being pressed when blood began running out. There was much excitement because of another old tale about the murder of a small negro whose body was found in a bale at the press. In our case, it turned out to be nothing more exciting than a chicken, which had been smothered in the gin-box.

Fire Cotton.—There is nothing as dangerous as a fire in a cotton warehouse, or in a line of cotton. The fire will run along the outside of the bales very quickly, and will then slowly eat its way into the center of each bale. You will apparently have the fire entirely out, and start moving the cotton, when several bales will suddenly burst into flames, due to the smouldering fire in the center being exposed to a draught of air and suddenly flaring up again. There is only one certain way of knowing a cotton fire is out, and that is to strip the bales, break them open, and spread the cotton all out in the sun. Then you know there is no concealed fire remaining. Owing to this danger, the insurance companies will not permit "fire cotton" to be stored in or near straight cotton, and furthermore will refuse to consider slightly scorched bales as regular, until they have been stripped and picked over.

Still another danger arises from fire cotton, and that is, bales thoroughly soaked with water and confined in a narrow space will get so "hot" that finally spontaneous combustion takes place. Many a fire at sea has been due to stowing wet cotton tightly in the hold, battening down the hatches, and leaving the cotton to "heat." Cotton seed will do the same thing and "hot seed" is a favorite complaint of the oil mills in wet years. Consequently, the insurance companies will not permit cotton from a fire, wet but not burned, or cotton which has been under water, as in a wreck, to be stored with straight cotton, or handled with it, until the water-soaked bales are picked open and dried out. When shipping fire cotton or wet cotton of this character by sea, the bales have to go as "deck cargo." We used to handle a lot of this sort of cotton for export to a drying and cleaning firm in Great Britain, and the stuff always went deck cargo. It was amazing how much water those shipwrecked bales would pick up. We once had some cotton from a wreck in Hell Gate, New York City, which had been under water some weeks, and that cotton weighed over a thousand pounds to the bale in some cases.

CHAPTER X

OTHER COTTON CROPS

General Remarks.—It is often taken for granted that the South has a monopoly of the world's cotton production and that she need not worry in the least as to any competition. This is far from the fact, as a glance at the subjoined table will show. Until the American yield came to be so seriously reduced by the weevil, there was no danger to the South from this foreign competition. A single year of small production, or a pair of years as in 1909 and 1910, might for the moment bring about a temporary market influence from the other crops, but, speaking generally, the price of cotton, so far as the supply went, was determined for a hundred years by the American crop. In the past three years, or since the weevil has spread over the entire South, a question has arisen in the minds of the trade as to whether this price control will continue. Foreign competition is slowly but surely becoming a factor of importance in the markets. It will be a serious matter if the American crop is no longer the dominant factor in cotton production, serious not alone for the South, but for the United States, since cotton is our principal export commodity. Before we offer any observation on the situation, a study of the other crops will be necessary, that we may have a proper knowledge of the world production.

This table is taken from the Annual Summary published by the *Financial and Commercial Chronicle* of New York, figures made up to July 31, 1922.

World's Commercial Crops of Cotton[1]

Countries	1921–22	1920–21	1919–20	1918–19	1917–18
Unit'd States	11,494,720	11,218,918	11,814,453	11,410,192	11,547,650
East Indies[2]	4,500,000	3,650,000	4,274,400	3,865,000	3,550,000
Egypt	1,200,000	800,000	1,072,519	906,767	1,188,010
Brazil, etc.[3].	2,000,000	1,350,000	1,050,000	680,000	500,000
Total	19,194,720	17,018,918	18,211,372	16,861,959	16,785,660

[1] These are "commercial crops." It will be remarked that the American figures vary much from the actual yield shown in the ginners' reports.

[2] Includes India's exports to Europe, America and Japan and mill consumption in India, increased or decreased by excess or loss of stock at Bombay.

[3] Receipts into Europe, etc., from Brazil, Smyrna, Peru, West Indies, etc., and Japan and China cotton used in Japanese and Chinese mills.

Egypt.—This crop is of particular importance because of the amount of extra staple cotton grown in the valley of the Nile. All Egyptian cotton is not long staple, but a large enough percentage is, so that Egyptian cotton almost dominates the extra staple market. There is in Liverpool a market in Egyptians for future delivery, as we shall have occasion to note in a later chapter. Not only is Egyptian a competitor in Liverpool of American Sea Island, Delta and Californa-Arizona, but despite a protective tariff, Egyptian cotton comes into the American markets as well. We will take the 1919-1920 figures as representing the last very active cotton season, when the mills were all employed at profitable prices. In the year ending July 1920, 485,003 bales of Egyptian cotton were imported into the United States, the figures being reduced to 500 pound bales. In 1919-1920 the total Egyptian crop was 5,571,632 kantars, a kantar being 99.049 pounds. The Egyptian crop in 1921-1922 is estimated by the Government to be the smallest in thirty years. This reduction was due in part to the fact that a large carry over, as in the United States, forced a reduction in the acreage, and in part to the ravages of the pink bollworm. It will be noted from the table, that, as was also the case in this country, the improvement in trade from the panic of 1920, and the shortage of the yield, caused the commercial crop to appear large on account of the movement out of the country of the old stocks carried over. The pink bollworm has been so destructive in Egypt, that some authorities express doubt as to a material recovery in the crop. At any rate, the presence of this pest militates against an increase in the production, and we need not consider Egypt as offering any additional competition for the South.

India.—This is the largest of the foreign cotton crops, the yield in 1919 being 5,796,000 bales (400 pounds each) and that of 1920, 3,556,000 bales. The figures are more or less unsatisfactory owing to the difficulty of obtaining accurate figures on the amount of cotton used in home manufacture. The cotton varies a good deal, as is natural in so large a country, but the staple is all short, the largest not being over an inch. Some cotton is raised under irrigation, but, for the most part, the yield is largely determined by the "monsoon," which brings the needed moisture. If that be not sufficient, or if it be unduly delayed, the Indian crop is curtailed. Cultivation is rude and primitive, and the yield per acre is small, only about 85 pounds to the acre. Roller gins are extensively used.

Indian cotton has always been a competitor of short staple American, especially in those years when the American crop is small and the price high. The Manchester and German spinners prior to 1914 would piece out their American supply by mixing with Indian cotton, at which they were quite adept. In this manner the consumption of American at high prices was reduced, and on several occasions this proved sufficient to stop a bull market in American cotton, due to the short crop. During the War the supply of ocean tonnage was so small that the competition of Indian cotton in European markets was not sufficient to stop the advance in American, and the extent of this competition came to be forgotten by many in the trade.

In Japan, however, Indian cotton continued to compete strongly with American, as may be seen from the figures. In 1913, Japan took 1,068,000 bales of Indian cotton and 459,000 bales of American; in 1918, the figures were 774,000 and 669,000 bales respectively; in 1919, the imports were 953,000 Indian and 830,000 American; while in 1920, Japan took 1,119,000 bales from India and 873,000 bales from the United States.

A remarkable result of the high prices in 1919 and 1920 was the importation of Indian cotton into the United States. Despite the short staple there was brought into this country in the year ending July 1920, 6,333,586 pounds of Indian cotton, or about 12,600 bales of 500 pounds each. The total amount is insignificant, but the fact that Indian cotton came here at all is an illuminating illustration of the competition brought about by the strain of very high prices.

Russia.—During the years prior to 1914, the Russian crop gradually increased until the 1914 crop was 22,000,000 poods, a pood being 36 pounds. The cotton is white and of good staple, but there are a good many cream colored bales, as well as tinges and stains. About 75 per cent of the Russian crop is raised in Turkestan, in Asiatic Russia, and poor transportation facilities for moving the cotton to market have held the crop down. The balance of the Russian crop comes from Bokhara, Khiva, Caucasus, and parts of Persia. Conditions in Russia appear so chaotic at the moment, that predictions as to the future of this crop are impossible.

China.—The size of the Chinese cotton crop has always been a puzzle, owing to the lack of reliable statistics. The Ministry of Commerce and Agriculture of the Republic of China recently issued a report that the 1919 cotton crop was 1,573,977,109 catties. A cattie is about 1 1-3 pounds, so that this is equal to over 4,000,000 bales of 500 pounds each.[1] Another bureau of the Republic of China has stated the consumption of cotton in Chinese cotton mills at 467,886 bales for the first six months of 1921 and 532,257 for the second six months. Of this amount only 92,774 bales were American, while 728,328 were Chinese cotton, the remainder being Indian and some Egyptian. A good deal of Chinese cotton has always gone to Japan, and the balance is consumed in home manufacture on the farm. Chinese cotton is white but harsh in character and the staple is short, not exceeding an inch. Here again we have an illustration of competition brought about by high prices. During the American Civil War cotton was brought to the New England mills from China. During the high prices of 1919 and 1920 the same thing has occurred, for, in the year ending July 1920, 57,000 bales of Chinese cotton were brought into the United States. Imports for the year ending July 1921 were 14,723 bales. The short staple of the Chinese cotton is a drawback, but it is obviously possible to raise cotton in China, and it is also possible that the spur of high prices might bring about efforts to improve the staple. The Chinese crop has always been so much an unknown factor, that the possibilities must not be overlooked, if the South is to continue with the weevil.

Brazil.—According to the report of the General Secretary of the International Federation of Cotton Spinners, quoted in the *Textile World*, October 1921, the area suitable for cotton in Brazil is larger than in the United States. In the state of Sao Paulo American cotton does very well. The Brazilian crop of 1919 was 536,000 bales (500 pound bales). A part of the crop is "tree cotton," the staple of which is superior and has been known to be as long as an inch and a half.

Peru.—This cotton is in part long staple and the result of the increased demand and higher prices during recent years has been an increase in the Peruvian crop and in the exports. The crop of Peru was 165,000 bales in 1919 and 150,000 bales in 1920. During 1919-1920 there were 63,425 bales of Peruvian cotton imported into the United States; and in 1920-1921 the imports were 22,597 bales (500 pound bales in each instance).

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[1] These figures are from the *Financial and Commercial Chronicle.*

West Indies.—These islands have always produced cotton. Indeed, it is said by some that cotton was first brought to the Carolinas from Barbadoes. All the West Indies have suffered severely from boll weevil, which has prevented the production from amounting to a great deal. When the price of staple cotton began to mount, the cultivation of long fiber cotton was taken up in earnest in Hayti and with fair success. There were imported into the United States in the year ending July, 1919, 3,882,944 pounds of Haytian cotton, or about 7,600 bales of 500 pounds each.[2]

Mexico.—This country has always raised cotton but the boll weevil severely reduced the yield as long ago as the Civil War, and in more recent years the pink bollworm has been destructive. A commission from the state of Texas visited the Laguna region around Torreon in 1920 and reported to the Governor that they found the damage by pink bollworm to be between 38 and 40 per cent of the crop. The damage to the grade was also considerable, and the amount of infected seed was large, although no percentage figures were given. The appearance of pink bollworm in Central Texas has been traced back to Mexico. The imports of Mexican cotton were 65,343 in 1919-1920 and 88,155 bales (500 pounds) in 1920-1921. Mexico cannot be considered as an active competitor until the insect damage is reduced.

Miscellaneous.—Cotton has been produced in Central America, and in the years of recent high prices Nicaragua exported some thousands of bales to Barcelona, Spain. It is said that Venezuela offers prospects for a good yield. There is a small amount of cotton produced in the Argentine, and experiments were being made with a view to expansion some few years ago. During the year 1920 Spain raised some 13,000 bales and efforts were being made to increase the production for use in the Spanish mills. Cotton was again produced in the South Pacific Islands for the first time since the American Civil War, New Hebrides and New Caledonia producing some 4,000 bales (500 pounds each) in 1920. There is talk of raising cotton under irrigation in Mesopotamia.

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[2] United States Department of Commerce.

British Dominions.—Cotton has long been produced in British South Africa but never in the expected volume. Queensland, Australia, has recently taken up cotton production, and, it is said, with excellent results. The acreage in 1921 is said to have been 14,000 acres, as compared with 1,500 the year before. The most significant fact in recent times has been the proposal to place an import duty on all cotton not raised in the British Dominions. The bill to put such a duty of sixpence a bale on imports into Great Britain has been introduced into Parliament by the Government and is expected soon to be passed. A grant of £1,000,000 is to be made by the Government to the Empire Cotton Growing Corporation.

Supply and Demand.—The world cannot long continue with the present supply of cotton. Either the South must increase its yield, or the world will be compelled to find cotton somewhere else. We have seen that it is possible to grow cotton in many other countries, and while it is true that the superior natural advantages of the South have never permitted the foreign crops to become of large size, still they exist and are capable of expansion. The situation in 1919 and 1920 was becoming acute. Prices for American cotton reached forty cents a pound for short staple, and the production in foreign fields was visibly stimulated. A world-wide commercial crisis in 1920 reduced the consumption of cotton very rapidly during a season when the American crop turned out larger than for several years. The result of this combination of larger yield and commercial stagnation was a period of very low prices, a slow movement of cotton to market in all countries, a reduction of acreage quite generally in 1921, and a smaller production. So far, the orders of events presents no novelty, for we have seen the same sequence many times in the past. Indeed, this is a normal method of balancing production, consumption and prices. As a matter of fact, the result of this evening up of demand and supply may be seen in the last five commercial crops of American cotton, which are all around eleven million bales: year ending July, 1922, 11,496,431 bales; 1920-1921, 11,175,409; 1919-1920, 12,252,-337; 1918-1919, 11,394,392, and 1917-1918, 11,864,500 bales.[3]

When we turn to the Census Bureau figures for the total ginning of the seasons, we find a very different situation. The final *Ginners' Report* for each year gives the production (500-pound bales, linters excluded) at: 1921-1922, 7,953,641; 1920-1921, 13,439,603; 1919, 11,420,763; 1918-1919, 12,040,532 bales.[4] It will be seen that the combination of acreage reduction, poor fertilizer, indifferent cultivation, and weevil, together with a poor growing season, reduced the 1921-1922 crop more than 50 per cent as compared with 1920-1921. The significance of these figures is much increased when we find the Department of Agriculture in September, 1922, stating that in the crop of 1921-1922 the damage from weevil is estimated at 6,277,000 bales of cotton, and that the percentage of damage was 34 per cent. As the estimated percentage of weevil damage in 1920 was 20 per cent, it will be seen that the weevil uncontrolled is a factor of grave concern to the South. We have seen that it is possible to control weevil, and we may reasonably expect that the South will make every effort to use the discovery of the Government agents and fight weevil strenuously. The danger of proclaiming that the weevil has brought very high prices and is, in reality, a "blessing in disguise," is so obvious that we need not dwell upon the subject.

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[3] New York Cotton Exchange figures.

[4] *Chronicle* figures.

Consumption.—We need also to look at the demand side of the problem. Here again there is some confusion in the figures, for the reason that there is a difference between the "takings" of the spinners and the actual amount consumed. It will suffice for our purpose to look at the "takings" of American cotton by the world for each season. These are as follows: 1921-1922, 12,889,045 bales; 1920-1921, 10,322,547 bales; 1919-1920, 12,567,364 bales; 1918-1919, 10,223,921 bales; 1917-1918, 11,741,987 bales.[5] Meantime the total world's consumption, from the *Financial Chronicle,* all kinds of cotton, was as follows: 1921-1922, 19,572,976; 1920-1921, 15,808,830; 1919-1920, 17,777,662; 1918-1919, 15,689,107; and 1917-1918, 17,099,678. These figures can be compared with the world's production as given by the same authority.[6]

It will be seen that the production of American cotton has steadily fallen as compared with the "takings" given above, until, in 1921-1922, the production was far under the takings. The gap was bridged for the year by the large supply of American cotton accumulated through the depression of the year before. The Census Bureau estimates that the stocks of American cotton on hand in the United States at the opening of the season, August 1, 1922, were 2,828,186 bales, as against 6,534,360 bales in 1921. With these figures as a basis, the *Chronicle* estimates the carry over of American cotton in the world on August 1, 1922, at 5,573,406 bales, as against 10,021,799 in 1921, and 7,062,041 bales in 1920. In other words, the reserve supply of American cotton has been reduced approximately 50 per cent in the past year. Now, crop predictions in early September are always misleading, but the Department has just estimated the current American production (season of 1922-1923) at less than 11,000,000 bales. In other words, with any substantial increase in the takings of American cotton, the present crop does not appear at all likely to add to the reserve, but, on the contrary, it is probable the stocks will be still further reduced. That is to say, we are coming to the time when the production of American cotton must increase, if the world is not to go elsewhere for its supply of cotton.

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[5] New York Cotton Exchange figures.

[6] *See* page 117.

Consumption Not Normal.—This serious situation is further complicated by the fact that in the past few years we have not had what might be considered a ''normal'' consumption of cotton. The results of the War are still in evidence, and while the various countries of Europe are slowly returning to their former takings of American cotton, it cannot be said that they have reached the normal. Russia can be eliminated except for that part of old Russia now included in Czechoslovakia, where consumption is increasing but where all spindles are not yet engaged; the German consumption is fair, but the exchange complication is a hindrance; the same may be said of Austria; while, in conclusion, it must be admitted that the whole world has slowed down in the past eighteen months (1920-1922) because of the commercial situation. It is a fortunate thing for the United States that the weevil crisis has come to a head at a time when world conditions have conspired to hold the price of cotton down. Otherwise, we might have had such a stimulation of foreign cotton production as to threaten the South permanently with serious competition, no matter what the result of attempts at weevil control.

Summary; Future Competition.—The South has been apt to look upon all talk of foreign competition as far-fetched, and to believe it to be a sort of propaganda against high prices. We must admit that a survey of the rapid growth of foreign competition in the high prices of 1919 and 1920 furnishes a strong argument against the benefit the South was supposed to derive from such prices for cotton. At the same time, a survey of foreign competition is no argument to the end that the South should raise cotton at a loss, or at a very small profit, in order to retain her monopoly. If the result of the present situation is that unfortunate conclusion, then the South has already lost her cash crop, and had best look around for a substitute. It may be remarked in this respect that the substitution will prove much more difficult than some of our enthusiasts believe. The South was designed by nature to raise cotton easily and profitably, and it is somewhat difficult to suggest offhand another crop to take the place of cotton. The loss of cotton as a cash crop would be a vital blow to the South, and would likewise be a most serious matter for the United States as a whole, since cotton is one of our principal exports.

We cannot look forward to a return of normal cotton consumption in the world with anything but apprehension, unless there is an immediate increase in the American production. A return of anything like the pre-war consumption means a return to the very high prices of 1919 and 1920, and that spells an immediate increase in the foreign crops. It is not necessary to enter into arguments as to this country or that, or to attempt to prove which foreign crop will be the one to increase. The world is not going to do without cotton, and it is going to secure that cotton at a price which will enable clothing to be made on a basis with other commodities. The importance of weevil control can readily be seen, since it is thus that the southern production can again be restored.

We must not take too gloomy a view of the prospect, because the Government has found a method to control the weevil, and the use of that method is certain to become widespread. What we must expect is that the South will do her utmost to combat the insect pests now threatening her prosperity, and that the nation will in turn assist the South whenever needed. For example, we might suggest that, if the quarantine against the pink bollworm in Texas has to be maintained for any length of time, it is unfair for the state of Texas alone to be called upon to shoulder the burden and expense. An appropriation may be asked of Congress, with reason, to assist in the cost of the quarantine, should it be found necessary. We might also suggest that the Federal Government may be asked to assist in the production of calcium arsenate in quantity sufficient to furnish poison for the whole belt. It is a national asset to have the control of the cotton production and price remain with the United States, and assistance on the part of the Government can certainly be asked with as much right as the Lancashire spinner has when he asks an appropriation from the British Parliament to secure a more plentiful supply of his raw material at a lower price.

It has been too long the custom to tell the small farmer that only the price need concern him, that the higher the price the better off he is, whatever the size of his crop. It is credibly reported that under the influence of this mistaken theory monuments have been erected to the weevil in Alabama. Certainly no one expects the farmer to produce cotton at a loss, but unless he be educated to the very real risks of high prices he may lose his price control before he is aware of his danger. Fortunately, there are signs that the solid men of the South, the thinking men of the community, are awake to the situation. They need to bestir themselves, to embark upon a campaign of education, to spread the knowledge of weevil control widely over the belt. The Government experiments have found the method, recent tests have shown the possibility of a small spraying machine of moderate cost, and it remains to educate the farmer. Also it is necessary to agitate for a large supply of calcium arsenate. We cannot expect too great results suddenly. It is only within three years the spraying method has been at all perfected, and two of those three years the southern farmer was prostrate in the throes of a commercial crisis for which he was not to blame.

In the future, however, we can certainly look forward to real efforts towards solving the weevil problem. The southerners of sixty years ago, confronted with a desperate situation, brought about a recovery in prosperity almost unparalleled in the world's history. We can surely rely upon their descendants to conquer the weevil. Fortunately, there is yet time. The foreign competition is growing; it is a very real danger; but the South has not yet lost control of her cash crop, and a united effort along reasonable lines will surely enable her to ride over this crisis, as she did over the more serious situation in the sixties and seventies.

PART II

MARKETING

CHAPTER XI

THE FARMER

Size of Farms.—In the days before the American Civil War there grew up the tradition that cotton plantations were of enormous size, with a large plantation house in which the owner lived in a sort of medieval splendor, surrounded by his slaves and dependents. It may be questioned whether in those days the picture were accurate, but it is certainly not accurate to-day. There are large plantations scattered through the belt which might approximate the old idea, but, speaking generally, the cotton crop is grown on small farms. The table will best illustrate this fact, and is taken from the Census Bureau 1920 figures. All farms are included, the figures not being for cotton farms alone.

State	Number of Farms	Average Acreage per Farm	
		All Land Acres	Improved Lands, Acres
North Carolina	269,763	74.2	30.4
South Carolina	192,693	64.7	32.2
Georgia	310,732	81.9	42.0
Alabama	256,099	76.4	38.6
Mississippi	272,101	67.1	34.3
Tennessee	252,774	77.2	44.3
Arkansas	232,604	75.5	39.7
Oklahoma	191,987	166.6	96.3
Texas	436,033	260.5	74.3
Louisiana	135,463	74.0	41.5

Small Independent Farmers.—The small farmer owns his own place, does his own financing, and sells his own cotton. The larger percentage of such farmers is white, but there are many colored independent farmers throughout the South. These men may have to borrow money with which to raise a crop—in fact, they usually do borrow money every year—but they do it themselves, either with the bank or with other agencies; they do not borrow through the intermediary of some larger farmer. These smaller farmers become owners of more land than they can actually cultivate themselves, and then they hire help. They may even have one or two tenant farmers, of the class mentioned below.

Larger Farmers.—By slow gradations we come to the farmer who owns a large amount of land, hires a good many "hands," and has a good many tenant farmers. The top of the ladder is occupied by the very large plantations, with their own gins, their own store, and many tenants. Some of the largest of these are now owned and operated by corporations. All the larger plantations have their own gins on which they not only gin their own cotton, but on which they also do custom ginning for their smaller neighbors. The large farmers have their own capital, and they also finance themselves through the country banks, the banks in the large nearby city, factors, and supply merchants. These planters also finance their tenant farmers.

Tenant Farmers.—These are of two classes, "croppers" and "renters." The croppers do not actually rent their land but are assigned so many acres on which they are to make a crop. The owner "finds" them in the spring, and they are obligated to give him their cotton up to a point where these bills are paid and where the sum agreed upon for the use of the land is also paid. These croppers are almost exclusively negroes, and their margin is narrow, so that it is of the utmost importance they should either raise a good crop, or, in case of a failure, should receive such a high price that they are compensated. Otherwise, they are in trouble with the owner, cannot "pay out" in the fall, and have to be carried over the winter. Of course, this represents a loss to the owner, and sometimes this loss is further increased by the fact that the negro, becoming discouraged early in the fall, sees no prospect of coming out even, does not pick his cotton, but wanders off elsewhere in search of employment. Then the owner either has to hire labor to pick the abandoned crop or lose the money he has invested in it. The weevil, when first in a neighborhood, causes much of this sort of abandonment by disheartened negroes who see no hope of a crop, and fear the next season will be as unfavorable.

The "renters" differ from the cropper only in the fact that they have a lease of the land, and are not necessarily obligated to the owner further than to pay the rent. There are white tenants who simply pay the rent on the farm and are not otherwise concerned about the owner. There are negro tenants who pay their rent in cotton, are "found" by the owner, and differ from the cropper simply in having a more definite attachment to the place. Renters also are in trouble if they do not have either a good crop or a high-priced one. The white tenant farmers usually have means to secure credit over an emergency such as 1914 or 1920, but the negro is simply "carried" by the owner.

Relations with Negro Labor.—It is difficult for the person not in the South to understand the relations between the negro laborer, whether hired hand, cropper, or renter, and the owner. The negro expects "his white folks will take care of him," and the phrase may mean anything. The owner does the planning and the thinking, the negro does the actual manual labor, and he confidently expects the white man to see that he comes out all right. The system works fairly well, although there are seasons when it is difficult for any one to get along. A year like 1914, or 1920, makes an almost impossible position for both owner and tenant. Both those crops were pitched in the spring in expectation of a good price in the fall, no matter what the yield. The owner had provided his finances on that basis, and the tenant farmer had been supplied in the spring in expectation of a good price. In 1914, on account of the World War, prices declined from 13 cents in July to 6 cents in November. The large yield which would have compensated for any ordinary decline was worse than useless, because for several months it was impossible to move the cotton out of the South. In 1920 prices went down from 35 cents in the early summer to 15 cents in the fall as a result of the commercial panic. Under such circumstances the tenant cannot possibly pay out, the owner must have his own paper renewed, and much financial stringency results. The following spring the negro tenant is held down very closely in the matter of supplies, and lives on a little ''hog and hominy'' and his own garden truck for the summer. It is this sharp variation in the scale of financing the crop which makes the so-called ''cost of production'' so misleading. Figures correct for one year may be entirely misleading the next.

Labor Shortage.—The 1914 crisis, the spread of weevil through the belt, and the revival of industry on a large scale, all combined to lessen the supply of negro labor in the South during the war years. A large immigration north took place, and the cost of raising the crop was raised as a result of the higher wages thus made necessary. A certain proportion of that labor has made its way back to the South, since the closing down of the war industries left many negroes unemployed to face a northern winter. It is true, however, that a large amount of labor appears to have been permanently lost to the South, so that a permanent advance in the cost of the crop is likely for this reason.[1]

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[1] A fresh emigration from the Atlantic to the north is reported in the fall of 1922 due to the weevil damage the past summer.

It is fair to remark that in the past sixty years the negro has made remarkable strides despite many natural disadvantages. The number of small, independent negro farmers has increased, and there are negro planters of the larger type with their own "renters" and "croppers." If you can get the average country bank to give you the number and average amount of their negro deposits, you will realize that the southern negro has done very well on the whole. It is also fair to remark that his white competitor is advancing. The cotton mills have made white labor valuable, and they have also raised the standard of living. The small southern farmer expects more from life than he did twenty odd years ago, and it is a good thing for the country that he does. It must be remembered, however, that to obtain that higher standard he will require, and secure, a larger margin of profit for his cotton than in the past.

Financing the Crop—*Factors.*—At the close of the Civil War in 1865, the South found itself bankrupt, with many scars of war, and with an utterly ignorant, shiftless negro population on its hands. The only visible asset was cotton, and to raise the first crop of cotton, cash was essential. The southern farmers came to New York to the merchants with whom they had done business before the War. The farmer had but one security to offer, and that was his anticipated cotton crop. He gave the merchant a lien on that, and thus secured the cash and supplies needed to put the crop in the ground. These were the first cotton "factors," as we know them. There had been factors in London in colonial days who handled the tobacco crop for Virginia, and there had been cotton factors at some of the Southern ports prior to the Civil War, but these were not exactly the same type as the modern factor. The southern farmer, when he gave the merchant, or factor, a lien upon his crop for the payment of the advances he had received from that factor, also obligated himself to ship the factor his crop for sale. A commission was charged for selling, a profit was made on the storage, on the insurance, and on the goods sold the farmer. The factorage business in those days was a profitable occupation.

As the South began to accumulate capital, the factorage business slowly drifted away from New York, Cincinnati and St. Louis back to the southern markets, both the ports and the interior. For years the factors of Norfolk, Savannah, New Orleans, Galveston, Houston, Memphis, and Augusta, to say nothing of scores of smaller cities, provided the cotton farmer with all his supplies, secured him all his money, and handled all his cotton. The factorage system was expensive, and the concentrating of so large a percentage of the crop in a score of markets gave unsatisfactory returns to the original grower. As the South gained in prosperity and financial ability, the factor declined in importance, and, to-day, it is a question whether he will not disappear altogether.

Modern Factors.—The modern factor still advances money to his customers, takes a lien on his crop, and has the cotton tagged in the country and shipped in to him for sale at the larger market in which he is located. The factor claims that he can secure money in greater volume than can the individual farmer, that he can secure cheaper storage and better storage, that he can thus obtain lower insurance rates, and finally that the larger market offers a better opportunity for the farmer to secure a higher price, both because the demand is centralized and because the factor by careful grading and stapling can secure a higher value for the cotton. There is merit in all these arguments, but the tendency is unmistakably away from the larger markets and back to the country. It is more and more customary for merchants to have their own buyers, or their own agencies, in the smaller towns, picking up the cotton direct from the farmer.

The factor borrows money from the banks in the larger cities on his customers' paper, and factors' notes are always present in large volume in the New York market every spring. Factor's paper is not itself available for rediscount at the Federal Reserve Banks, because it is regarded as "finance paper." On the other hand, the Federal Reserve Bank will discount drafts of cotton producers drawn on a factor when discounted by the drawers.[2]

When the farmer does sell his cotton through a factor, the bales are tagged in the country, shipped into the large market, and there sampled and inspected by the factor's "shed man." He reports the weight, and he also reports any damage or irregularities in the cotton. The samples are then taken up into the factor's cotton room, classed out as to grade and staple, and offered for sale as the owner may direct. The price may be left to the factor's discretion, or he may be instructed what price he is to obtain. In any event, the factor's remuneration consists of the commission he receives for selling the cotton, which commission is usually figured on the price obtained. The factor never buys cotton for his own account, unless forced to do so by the inability of the customer to pay out advances. In selling, the factor will always try to make the "good end" of a customer's cotton sell the lower end. That is to say, he will start off by asking a round price for the lot, and will refuse to allow the buyer the privilege of selection. This method of selling is modified when the exigencies of the market make it impossible for the factor to stick to the usual rule.

The tendency of the factor to change the character of his business has become more marked as the years progress. Many factorage firms have started a shipping department, which, when successful, usually absorbs the old business.

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[2] *See* "Rulings," F. R. B. Bulletin, November, 1919, p. 1054; same, February, 1920, p. 162; same, November, 1920, pp. 1177 and 1176.

The firm begins to look around among its country customers for cotton it can use on orders rather than for cotton to sell on commission, with the result that before long it has become a firm of merchants instead of factors. Another development has been the increase in what is known as the "free-on-board" or "f.o.b." business. A merchant in Memphis will go to a factor's sale room, or to the sale room of one of those firms, part merchant and part factor, of which we have spoken, and will find a lot of samples on the table. He will ascertain that the cotton is at Xville, Arkansas, and is for sale free-on-board the cars at that point. He buys the cotton, sends out to Xville, weighs it, inspects it, marks it for shipment, has it compressed either there or at the nearest "concentrating point," and the cotton moves to the mill, without ever actually coming into the Memphis market. Of course, this f.o.b. business tends to further disrupt the ordinary factorage business, because, in these days of long distance telephones, any merchant can make arrangements to take cotton offered to him over the phone from the country, and either ship it out, or resell it on the Memphis market f.o.b.

Country Merchants.—As the factor is declining, so the country merchant is coming into increasing prominence. Everyone knows the average country store, and many are the jests passed on the variegated stock of merchandise carried in such an establishment. The country store in the South has still an additional department, for they all handle more or less cotton. The merchant will give his farmer customer credit in the spring for supplies, take his "crop note" or lien on part of his anticipated cotton, and expect to be reimbursed in the fall. The farmer brings his cotton in to the country merchant who sells it in much the same manner as the factor. The difference between them lies in the fact that the country merchant frequently takes the cotton "to account," whereas the factor seldom if ever does so. The country merchant and the farmer frequently come to an understanding as to the price of the cotton, and the value of the bale is then credited the farmer's account, and the cotton becomes the property of the country merchant. He usually tries to sell it off his sample table to one of the local shippers, but the fact that he owns the cotton himself tends to put the country merchant in one way and another into the cotton merchant's business. We shall hear more of this when we come to the first actual steps in marketing.

Supply Merchants.—Theoretically these are the wholesale grocers in the larger cities who supply the country store with their stock of goods. They are really the smaller, and sometimes the larger, "jobbers" in the grocery trade. The larger firms do not handle cotton at all, unless they are forced to take cotton from some country merchant who cannot otherwise liquidate his account. They will often take crop lien notes, however, indorsed by the country merchant, as security on overdue accounts. The smaller supply merchants in the smaller cities may combine both a general store and a jobber's business. In that case, their retail department works much as does the usual country store and handles cotton for customers. The terms supply merchant and country merchant are often used as synonymous words in loose conversation about the markets and market conditions.

The Country Banks.—The financial institution, with which the country merchant and the farmer have to deal, is the small bank in the country town. In any section, where there is a "cash crop" to be moved every year, the smallest place will have a bank. This is written in the Adirondacks, in a village of between 700 and 1,000 people, and we are eight miles from the nearest bank, with a somewhat larger village eight miles beyond us, also without a bank. Such a situation in the South is unthinkable. A village of this size would surely have one bank, and, if the cotton handled in the place happened to be in fair volume, there might be two banks. These country banks have a modest capital and surplus, and their deposits are limited, but they do furnish a valuable assistance in providing capital to move the crop from first hands. The country bank also provides a link between the farmer and small merchant and the larger financial centers. These banks all have correspondents in the large cities, not alone in the South, but in the North as well. Through these channels filters down one way the financial opinions of the large cities and large banks, and up the other way, the views of the interior upon the state of trade and the conditions of the crops. It is difficult to estimate offhand which set of opinions carries the greatest weight, but together they represent no small influence.

To the country bank come all classes of farmers and merchants, from the small renter to the large planter, and from the small country merchant to the interior shipper, engaged in moving the cotton to the mills either at home or abroad. The small farmer and the smaller country merchant will do all their business with the country bank. The larger men, of course, do business elsewhere also, since the resources of the interior bank will not suffice for their needs. The crop notes, originally discounted by the country bank, will be found in the loan portfolios of the larger institutions of the cities, as the money to make and move the crop is sent out through the usual banking channels.

The country banker has great influence in the farming communities, for it is to him the farmer goes in the spring for funds and for advice. Even if the farmer is being financed by the country merchant, the result is the same, for the latter is doing business with the bank. It may be surmised that the country banks can exercise much influence upon the acreage in the spring and upon the marketing in the fall. It is the refusal of the country bank to advance additional funds with unpaid paper still on their books which has much to do with the curtailment of acreage in a year of stress, such as the spring of 1921. The influence of the country bank upon the acreage is usually for the benefit of the community. They will advance to the extent of their ability for supplies and fertilizer in years when they believe a large crop will prove profitable, and they will refuse to do so in the years when the situation seems to them to warrant a curtailment.

Similarly in the fall they can exercise considerable influence upon the marketing of the crop. Here their judgment is more at fault than is the case in the spring. They are naturally anxious for their customers to secure as high a price as possible, and, in years of market excitement, they are sometimes carried away by the prevailing belief in extraordinary prices. At such times, they encourage holding after the market is at a level, where sales would be more sensible. The reverse is also true. Being often farmers themselves, and often having farmers and country merchants upon their directorates, the average country bank feels the discouragement of low or falling prices very sharply. They are as apt to get alarmed at the bottom as they are to get over optimistic on the crest of the wave. Yet, we must take care to make such criticism general, for the country banks did well in the 1914 panic and again in 1920, although in the latter year they had very large unliquidated loans on their books. On the whole the War record of the southern banker will compare well with that of his contemporaries elsewhere. At least he was not so guilty in respect to financing wild speculative ventures in 1919 and 1920.

Farm Mortgages.—These can be dismissed by us very briefly. Unless it be to provide weevil fighting machinery, or in the case of some other very real emergency, it is bad practice to finance a crop by a mortgage upon the land itself. Purchase money mortgages are a subject which we need hardly consider. The banks in the small towns have done pretty well in holding down inflated farm values.

CHAPTER XII

PRODUCERS' ASSOCIATIONS

General Remarks.—It is common for all men engaged in the same line of work to associate themselves for mutual benefit, and we find such associations in every occupation from the labor unions to the bankers' and lawyers' organizations. The farmer is no exception to the rule, and his different associations have recently received much publicity. It is necessary, therefore, that we spend a short time in a study of the cotton producers' associations. The object of these organizations is twofold, first to facilitate the improvement of agricultural methods and results by the exchange of experience and the spread of new discoveries, and, second, to benefit the farmer by obtaining for him a larger return for his work. Both of these objects are laudable, and both are for the benefit of the community at large as well as the benefit of the farmer. The production of large staple crops is to the great advantage of the country, because thus will be provided an ample supply of food and clothing. Likewise, the export of a surplus of these crops will assist the general financial situation of the country. On the other hand, it is of value to have the farmer well paid for his labor, because only thus can he be for long induced to raise large crops, and because his buying power is of great assistance in bringing about a demand for all manufactured articles which will enable the industrial population to be fully employed at good wages. Farmers' associations then are not open to criticism in their inception nor can their aims thus broadly stated be thought unjustifiable

It is unpleasant to appear to object to the methods of these associations, but those methods have at times been sadly misdirected and have caused the farmer himself much unnecessary trouble. One of the primary difficulties is that the associations tend to devote their energies to one single point, namely, the matter of the apparent price of the product raised. A small crop with very high prices will often appear more desirable than a larger crop at lower prices, so the associations tend to work for that object, although the best interest of the farmer lies in the other direction. The true advantage of the producer lies in the largest actual return rather than in the absolute prices quoted per pound. It is on this score that valid criticism of the Southern associations may be offered.

Two Kinds of Associations.—There have been two distinct kinds of producers' associations in the cotton trade, one, the old-style organization, and the other, the new co-operative associations. They need to be regarded separately, because they are very different both in organization and methods, although both aim at the same advantage to the farmer, namely, a larger return. The old-style associations again may be divided into two classes, the more local organizations, which were the original so-called "farmers' unions," and the general organization, holding an annual convention, with "national" officers, and general reports and proclamations.

Local Organizations.—These were the farmers' unions at first, and still are thus named in many sections. There has recently grown up, however, a new system of local organization by counties, the so-called "farm bureaus." These associations devote most of their energy to assisting the farmer in problems of agriculture, in placing before him, with the assistance of the Department of Agriculture, the latest information in regard to cultivation. They also foster the interchange of ideas and experiences among their members, and issue reports and bulletins as to the results of new methods applied in the local county. Their work is of great benefit, and it is to these local "agents" and county organizations that the trade looks with hope in the matter of weevil control. The actual experience of a neighbor means much more to the average farmer than any amount of general information disseminated, however carefully, by the Department.

General Organizations.—These have also accomplished much for the cotton planter along the same lines. Concerted action by the local and general producers' associations resulted in the adoption of the Government Standards of grade, and the use of them generally throughout the South. This was of real service to the farmer, since he had now an opportunity to study the value of his cotton and to obtain more closely its actual value at the time of sale. These organizations have also tried to improve the warehouse facilities in the South, in order that a farmer might store his cotton safely and with a minimum insurance cost. It is true that they have not yet eliminated the old-fashioned wooden sheds, nor have they managed to solve the storage problem satisfactorily. They have not had the time nor the capital to alter the situation over the entire South. They have, however, accomplished a great deal of good, and the improvement in warehouse facilities is marked in recent years. They have so far neglected the important question of storage upon the farm. We have referred elsewhere to the loss incurred by the farmer by utter carelessness in handling his own cotton at home. This is largely a matter of education, and the local organizations have a great opportunity here. The farmer who "holds" his cotton for a higher price by dumping the bales in the front yard without adequate protection obtains no advantage from a rise in price. On the contrary, it will often happen that when he is correct in his market views and the price does advance, he sells his bale for a net sum smaller than he could have obtained at first, simply because of the loss in weight due to the country damage. The economic loss involved in careless handling of cotton amounts to a large sum in any given year.

Disadvantages.—So far we have found that the producers' organizations have accomplished only good. They have also an evil side, in which the larger associations are most to blame. This evil arises from the fact already mentioned, namely, that they look at the quoted price alone, and pay no attention to the actual return the farmer may expect. This point of view in many cases defeats its own object. The large associations are always of the opinion that the crop will turn out badly, and are always issuing public statements to that effect. The very natural result is that such statements cease to be of real value in the markets. You cannot continue to issue crop estimates which persistently fall short of the yield, and have those estimates long retain any influence. This habit of understating the crop outlook is a foolish mistake. Reports from producers' associations carefully collected, and found to be as accurate as such estimates can be expected to be found, would exercise great influence upon the going price of cotton. As it is now, their estimates deceive no one except some of their own members, and all the influence which the opinions of the planter expressed thus in an official manner might wield is lost because of the past experience with such estimates. The same remark might be made in regard to the estimates of consumption and the predictions as to trade made by the spinners' associations, but here the evil is not so serious, because the mill owners themselves, being men of capital, can afford to be misled, if they so desire. The average farmer can not afford to so deceive himself, and frequently he is fined pretty severely for his credulity when the actual size of the crop causes a subsequent decline in prices.

Low Grades.—Another result of the obsession that the quoted price alone is the object the farmer must attain has been the campaign against cotton below the grade of middling. The steady widening of the differences we have already noted in a preceding chapter, and the whole subject will be treated at length in a subsequent chapter upon the relation between future contracts and spot cotton.[1] The farmer has lost money by this scaling down of his low grades. He is bound to have them to some extent every season because he cannot get all his cotton picked out before frost. In the bad years like 1906, 1913, 1919 well over half his crop will be low in grade—that is to say, will be below the grade of middling. On the law of supply and demand, the supply of these lower grades will widen their discount in such a season, but, as cotton is indestructible, there is no reason why an oversupply should be allowed to widen the discount so much, and there is certainly no valid reason why the farmer should be forced to sell at the lower price. The merchant finds a profit every time in purchasing the low cotton and carrying it until the spinner is willing to pay a price more nearly commensurate with its actual spinning value. Yet, we find that the producers' associations have devoted themselves entirely to the matter of the quoted price of middling, and have entirely neglected the lower grades of cotton. The result has been a loss to the farmer of a magnitude not realized even within the cotton trade.[2] There must be a change in the attitude of the farmer towards his own cotton. The additional cost of raising cotton under weevil conditions will necessitate a study of the economic value of all his product, whether or no such a change in attitude be immediately popular.

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[1] See Chapters XXIX and XXX.

[2] See Chapter XXX.

Price Proclamations.—Another persistent mistake made by the general associations of producers is the continual announcement of what price the farmer will accept. Here we touch upon a very delicate subject. The farmer is certainly entitled to all the profit he can make out of his own product, and, so long as that profit is not so great that the consumption of cotton is curtailed, it is to the advantage of the community he should receive a handsome return for his labor. So far as he is concerned, it is also to his advantage to receive a large profit, unless by so doing he has advanced the price to a level where foreign competition will eventually force him through a term of years to accept a much lower level of prices. This last danger is becoming more serious every year of small American crops and high prices.

Generally speaking, the open market may be relied upon to take care of all these matters. The price may not always be satisfactory to the farmer; but, then, the price is not always satisfactory to the consumer. The give and take between them in the market will average out a rough sort of justice in the long run. There come years, however, such as 1914 and 1920, when the farmer must receive all the encouragement he can to sustain his market, and not allow himself to be forced out of his product at a ruinous loss. Here the producers' associations do excellent work by advising and encouraging their members. Their influence should be very helpful in these seasons of distress, and would be even greater if they did not advise the same conduct every year, entirely irrespective of price. They should reserve their ammunition for the years when it is needed and not waste it every single fall by advising a price above that of the going market. Sometimes this advice is very serious for the farmer, as witness the season of 1921.

It will be replied to this criticism that it is unfair to advise the farmer only to hold his cotton in years when he must do so in order to survive at all. That is beside the point. If the farmer believes the market will be higher, he has the undoubted right to withhold his product in hope of obtaining that larger return. It has happened in the past, and will happen in the future, that he has profited by so doing. But he cannot hope to do this every year utterly irrespective of crop or trade conditions, and it is foolish for his associations to waste their energies and lower their influence by always advising him to wait for a price still higher than the going market.

New Style of Producers' Associations.—We have now a new attempt to give the farmer a better return for his cotton, and that is "coöperative marketing." The illustration always brought up to prove the success inherent in any such undertaking is that of the Fruit Growers' Associations of California. The illustration is quite misleading, because the problem is by no means the same. The citrus fruits are perishable articles, and must be sold at once, unless some means of artificial preservation is provided. Cotton is not perishable, and can be stored under proper conditions indefinitely. The fruit growers of California felt that it was imperative they have some way of combating the danger of their product spoiling before they had a market. Shipping fruit to the commission merchants in the large cities, and having the choice of accepting whatever price the temporary condition of the market gave them, or losing their fruit through decay, was not a fair marketing proposition. They combined their forces so that they might coöperatively preserve their product, and thus obtain a fair market price. The attempt was successful and has been held up ever since as a proof that coöperative marketing must be successful per se.

Cooperative Cotton Marketing.—The problem in cotton is entirely different. The article is not perishable, and the grower needs no artificial means of holding it off a glutted market. It is said that he does need the assistance of a coöperative association in order to market his product slowly instead of putting it all on the market in the early fall. The fact is that in the past ten years the marketing of the crop has tended more and more to spread through the season. We no longer find the merchants closing their books in April and May, and their offices in June, not to reappear until September. The cotton business now continues through the entire year, and it would seem that the tendency is steadily in that direction. There are various reasons for this change. In the first place, the farmer is less dependent upon outside financing than ever before. He owes less money on his crop, and is therefore under no obligation to sell. In the second place, the country bank is less inclined to push him in the early fall. In the third place, the difficulties of transportation in the World War prevented the normal movement of cotton, and changed the methods of marketing. The stocks of cotton are more nearly divided now between the southern markets and the consuming markets. The whole tendency of the trade is in the direction of the professed object of these coöperative associations.

Comparison of the Associations and the Present Methods.—When all is said and done, the whole question of the ultimate success of these selling organizations lies in the matter of cost. Will the cost to the farmer be less when he undertakes through an association to sell his cotton than when he allows his cotton to pass through the usual channels of trade? It is recognized to be impossible for the spinner to deal directly with the farmer individually. The spinner requires cotton as nearly as possible uniform in both grade and staple. Some one must collect the different styles of cotton, select them from the mass of the bales as they come from the gin, and offer the even running lots to the spinner. The machinery, erected by the trade for this purpose in the past fifty years of actual experience, is a complicated piece of mechanism, which we are now engaged in studying. The process sounds very simple, but the actual work of classing out the cotton, of offering just the correct variety to each individual spinner, and of carrying the balance until it can later be sold to still other manufacturers, is a business requiring both skill and experience. There are many merchants engaged in the trade, and, as we shall see in later chapters, each firm does a somewhat different character of work. Now all these people are compensated for their services, theoretically in accordance with the importance of their work to the community, practically, in accordance both with the need of the community for their services, and with their individual ability to perform the service. The cotton trade has always been conducted in an open market, and under conditions of sharp competition, so that the actual cost of moving the cotton from the farmer to the mill has been minimized. Transportation charges, interest rates, storage, insurance, loss in weight—in short, what we may call "fixed charges"—absorb most of this cost. The profits of the merchants engaged in the business have never been excessive. Messrs. Anderson, Clayton and Co., a firm well known in the South, and throughout the cotton world, stated in 1911, that: "Under the present system of marketing we believe no one familiar with the facts would contend the average expense of marketing from producer to the spinner, so far as expense and profits of the middleman are concerned, would exceed an average of $1 per bale." Since those lines were written, the average expense has undoubtedly doubled, or possibly tripled, as has been the case in all things; but, even so, the cost of marketing under the present system is not heavy. In fact, the whole system of cotton marketing is ingeniously contrived to keep down the risk of loss, and thus to lessen the cost of the marketing.

Task of Cooperative Associations.—If these organizations are to succeed they must demonstrate that they can do this work cheaper than can the present merchants. They have not been in existence long enough to demonstrate whether they can do so or not, and it is unfair to take their selling figures for the past couple of seasons as a criterion, because their organization was not complete. If they can do this work for the farmer at a lower figure than it is now done by the regular agencies of trade, they will eventually succeed. If they cannot, then they will eventually disappear. Other predictions at this time are of little value. We can state the problem, and leave it for time and experience to solve.

Some of the associations recognize the difficulty of their undertaking and have announced that they do not intend to compete with the merchant in so far as the spinner is concerned. They announce that they intend merely to assist the farmer to sell gradually through the year, to assist him in obtaining a full measure of grade and staple value for his cotton through the experts employed by the association. It has also been stated that they intend to assist the farmer to do his own financing, and to accept his crop notes, he to obligate himself to ship the cotton to them in the fall. Here is presented a somewhat different problem, or, rather, the problem from a somewhat different angle. If this be the ultimate object of the coöperative associations, then they propose to take the place of the factor and the country merchant. Once again the eventual answer will be, simply, which costs the farmer the less, to agree to finance himself through the associations and to sell through them, or to deal with the factor and the country merchant as heretofore? We cannot predict the answer, but we may point out, that, because the factor has been found expensive and unnecessary, his place is being taken slowly but surely by other agencies. Whether this will now prove true of the country merchant remains to be seen.

Dangers of the Associations.—So far the associations have refrained from any announcement of price requirements. In fact, the Mississippi Staple Association advertises that one-twelfth of all the cotton intrusted to them will be sold every month. Of course, that is simply the carrying out of the policy of "gradual marketing" to its ultimate conclusion and equally, of course, the farmer will receive an average price for his crop. There is a danger that competition from California and Egypt may be further stimulated in order that the spinner may secure in certain months his requirements when they are above the total supposed to be sold in that month by the association, but, otherwise, there can be slight objection to the announced plan.

The other associations so far have refrained from making announcements as to their price requirements. It is to be hoped they continue to do so, for, if this new coöperative marketing degenerates into an attempt to fix the price of American cotton by controlling a large portion of the supply, the danger to the South is manifest to any thinking man. One hesitates to use an ugly word, but the fact is, any such attempt would be a "corner," and corners never succeed commercially. We have seen the growing danger of foreign competition, and the injury to the South resulting from any present attempt to exact a high price for their cotton might prove far-reaching. No such attempt has yet appeared, and the associations have announced that such attempts are furthest from their aims. The matter of the price in connection with these coöperative selling associations will bear watching, since it can prove the rock on which they founder.

Summary.—We may sum up the situation as follows. The old-time producers' associations have done the farmer both good and harm. It is probable the good predominates, since the more intelligent planters have long since lost interest in the market campaigns, which have injured their influence. On the other hand, their educative work is of great value. The new coöperative associations are on trial, and we cannot say as yet whether they will perform an economic function, and so, in some measure, alter the usual process of marketing the crop.

CHAPTER XIII

GINS; WAREHOUSES

Gins as the First Mechanical Step in Marketing.—We have considered the gin in connection with the production of cotton as the last step in the growth of the article. But the gin also fulfills another function, for it is the first mechanical step in the marketing. In this respect, the gin bears a close resemblance to the threshing machine, for wheat cannot be marketed until the chaff is removed, and cotton cannot be marketed until the seed is removed. The difference between the gin and the threshing machine is that the seed is removed from cotton by machinery in a building away from the field, while the chaff is removed from the wheat in the field, where the wheat was grown, and as a part of the harvesting.

Ginners and Marketing.—The ginner is not a merchant and does not handle the cotton he gins. He does handle the seed, as a result of which the gins have often been owned and operated by the cotton seed oil mills anxious to control their raw material supply. This practice has been prohibited in some states by legislative enactment, on the ground that the price of seed to the farmer was thereby lowered. Into that controversy we do not need to enter, but the laws have a bearing upon the gin compress, which we must now consider.

Gin Compress.—The package of American cotton has always been severely criticized, and there have been various proposals for improving the bales. The latest of these is to have the bale compressed at the gin, so that the bale will not have to be rehandled later, but can be shipped direct from the gin to the mill. It is thought that this will eliminate much of the torn and ragged bagging and produce a more satisfactory package. The objection to the scheme is the sample question, since under present market conditions the bale must be sampled many times. It is difficult to sample compressed bales without taking off a band, which injures the package very much, because it is not easy to replace the band, and, as a matter of fact, it is seldom replaced properly. Compressed bales are sampled every day in New York, the northern markets, and in Liverpool, but in each case the bale is at the end of its journey. Any damage resulting from the removal of a band cannot amount to much between any of these markets and the mill. The case is far different with a compressed bale in the South, so that the sample matter is a serious drawback to the gin compress.

It is proposed by the new coöperative Producers' Associations that they will sample the bale at the gin, class and staple the sample, and certify the quality of the bale thereafter, so that no fresh samples may be required. The proposition sounds very well, and, in the case of the shorter cotton, it may work, but the mill will surely require samples on any long staple bales, and the merchants are not likely to take the Association's grade and staple. This is not due to distrust of the class, but to the fact that there are so many different values assigned to cotton by different mills that the merchant will wish to know exactly what he is handling.

Another objection is the fact that the steamship people are sure to require high density compression again as soon as the freight room situation permits. Even with a surplus of freight room they are attempting to secure high density compression by offering a premium. It is doubtful if the installation of high density presses at the gin is a practical matter from a financial standpoint. On the other hand, if the bale must be compressed again to high density after the gin compress, then there is little point in the latter.

Finally, the gin compress faces the strength of invested capital. The South has a great deal of money invested in the present system of compresses and warehouses, and capital is loath to scrap old investments for new. This argument will prove of no value, once the gin compress becomes an economic necessity, but it is a factor against the immediate adoption of the system. In short, the gin compress is one of those new experiments, which, while possessed of obvious merits, have also obvious defects. Time is required to decide whether the merits outweigh the defects, and we cannot now tell how far the gin compress will develop.

Gin Compresses in Operation.—The gin compress is actually in operation on one or two large Mississippi plantations, where the cotton is grown for a syndicate of English spinners and does not come upon the market in an ordinary sense. The gin compress is also in operation in Oklahoma where the gins are operated by a large firm of exporters and general cotton merchants. They class their own cotton right at the gin, sample and mark the bales up into shipping marks as they come from the gin, so that no additional samples are required. If they do resell the cotton, then either the buyer takes their class, or else the bale does have to be re-sampled. As a rule, the cotton is shipped direct to Europe or domestic mills by the firm owning the gin. It might be thought that this eliminated all objections, and, so far as we have mentioned the difficulties, this is true. On the other hand, new difficulties have appeared. There is agitation that the farmer's price is too much controlled when the gin is owned by a shipper and when the farmer's cotton is sold as soon as ginned, so that it is easier for him to deal with that shipper than to haul his cotton away for a competitive market in the town. This is the old complaint about the seed and gins being owned by cotton seed oil mills. We need not enter into a discussion of the merits of the contention, but it may become a matter of common belief. Another disturbing element is the tendency of the farmer, under such circumstances, to sell his cotton "in the seed." This is bad practice, because it is difficult to foretell the grade of lint cotton from seed cotton, and the buyer protects himself by lowering his price.

Warehouses in Small Markets.—From the gin the bale is usually taken to the nearest town for sale, so that all towns in the South have their own warehouse. Very often they are managed by the country merchant, who, finding himself compelled to take customers' cotton to account, and to store and sell other customers' cotton, builds a warehouse for the purpose of conveniently doing the business. The old-fashioned country warehouse is a line of brick sheds around all four sides of an open square, with a doorway on one side of the buildings. Sometimes one side is left open. In any event, the shed walls are of brick, with brick partition walls between compartments, and the roofs are of tin, or corrugated iron, or less often of wood. The floors are often lacking, or are of stone or wood. The more modern sheds are usually of concrete construction. The protection afforded the cotton varies with the standing of the firm. Sometimes the old buildings are tight and the cotton is protected from damage, sometimes the roofs are out of repair, no attention is paid to the mud in the open courtyard in turning out cotton, and the damage is severe. Insurance rates are high in all old-fashioned sheds, and while lower in concrete buildings, tend to a relatively high ratio in all these "country" warehouses, because of lax fire regulations, and poor fire protection. The cotton stored in these warehouses is almost always "big cotton," since it is after the merchants have bought the bales that they go to the press for shipment.

Warehouse Receipts.—The receipts or "tickets" issued for the bales stored in these small warehouses are usually taken by the local bank at face value. They are not as a rule accepted outside the home market, unless indorsed by some reputable firm of standing, or by the bank. These small warehouses have an unenviable reputation both for carelessness in handling receipts, and for the lack of financial ability to stand behind them. The farmers' unions have devoted much energy to the correction of abuses in these small storage plants and have built plants of their own from time to time, where proper storage seemed impossible to obtain in any other manner. There is much agitation on the subject of forcing the small warehouses so to conduct their business that their receipts may be of value to the farmer as collateral.

Warehouse and Compress Plants.—At the more important country towns is usually to be found a warehouse plant and compress combined. This plant is located along the railroad with convenient switching and car storage tracks. The old-fashioned press and warehouse is built on a large wooden platform, elevated on piles above the ground to the distance of the usual freight platform. The press is under cover at one end of the platform convenient to the siding for outgoing freight cars. The foundation of the press is of stone or brick, or possibly concrete, and the boilers and engine room are protected by brick partitions. Outside the press proper, and sloping upward, so that bales may be more easily trucked down to be compressed, are low wooden sheds, under which the cotton is stored, bales on end, "tags up and out." This cotton is usually "big," as labor is saved by having the compressing and loading done in one movement when the bales are shipped. At the end of the season, when it is decided to lay up the press for repairs, or when they wish to run no more that year to save expense, they will press up all the cotton and store it "flat." In a large crop year it will sometimes be necessary to do the same thing in order to save room.

When the shed room is ample for the usual amount of cotton handled, the storage protection in these plants is good. The fire protection is also better than in the small-town warehouse, and, while laxness is common, some attempt at fire regulations is also made. The insurance rates are high in all these compress and warehouse plants, for the fire risk is not small when inflammable material is stored in wooden sheds, or on open platforms alongside a railroad. The shed room is often inadequate for even the usual receipts and much cotton is stored in the open on the platform, the idea being that the bales will move away so rapidly that the outside cotton will not be exposed long enough to really damage. This theory is fairly correct except in times of car shortage, export embargoes, or other unusual delays, or in times of large local receipts. Then many bales are stored on the ground and damage is large. The loss from this sort of "overflow" is sometimes considerable, and another difficulty is that the railroads are loath to give "clean" bills of lading, even after the cotton has been reconditioned.

Warehouse Receipts.—The sections of the sheds and the open platform are marked off by numbered posts so that the cotton can be carefully checked into the "place book," and the receipts issued accordingly. These storage plants do have "overs" and "unders" at the end of the season—it is remarkable how easy it is to lose a five-hundred-pound bale of cotton—but their financial standing is such that their receipts are usually accepted. The exceptions to the rule occur in the case of those plants which have a reputation for extreme carelessness with their papers and whose financial standing is doubtful. Carelessness with valuable papers is a besetting sin of the South, and while progress is slowly made in the right direction, sufficient laxness remains. It should be impossible to get a warehouse receipt except on proper authority, and yet, in many a compress plant gross carelessness rules as to signing receipts until some scandal or some severe loss alters the practice.

Country Railroad Bills of Lading.—The same remarks can be made about country bills of lading which are too often signed by the agent with the utmost freedom, simply on the statement of the press that so many bales have been loaded. As an illustration of this sort of heedlessness, an incident in my own office may be found amusing. Some ten years ago there were presented to us in New York on a single morning, five drafts for 100 bales each, ladings attached, from a country station in Mississippi. The agent's name was signed in a different handwriting on each bill of lading. We had the Assistant General Freight Agent in New York investigate and it developed that not one single lading had actually been signed by the agent, the only person authorized by the road to sign, although the cotton had really been shipped. One lading had been signed by a clerk in the station, one by a clerk of the shipper, one by a negro porter, one by a friend of the agent, and one by an obliging freight conductor, the agent "authorizing" all these signatures over the telephone. Of course it was done to accommodate the shipper, and in this instance no harm resulted. It may be imagined, however, that bill of lading frauds were not uncommon, and finally two gigantic swindles came to light in the spring of 1910, with double and triple ladings out against the same cotton, and losses running into the millions of dollars. Since that time the railroads have been more stringent in their regulations, particularly with export cotton. The Liverpool merchants and bankers will no longer accept drafts with through ladings from the interior unless there is attached a "validation" certificate signed by the agent. Each station is issued a set of numbered validation forms, the stubs properly filled out must be returned to the General Freight Agent of the road after each shipment, and the certificates on hand are checked up by the auditor when he checks the tickets.

Concentration Points.—Most interior compress points are known as ''concentration points,'' that is, stations at which cotton may be assembled for compressing and shipping without the payment of the full amount of local freight into the station named. The railroads take the compressing charge, add it to the through rate, and then guarantee that the result shall not be higher than the rate from the originating point in the country, and that the full amount of the local rate into the concentration point will not be collected. These are known as ''backhaul,'' or ''concentration,'' rates, are regulated by the Interstate Commerce Commission, cannot be varied by the roads, and are therefore no longer a method of concealed rebates, as was too often the case twenty-five years ago. The expense bills of cotton moving into the concentration station may be used with outgoing ladings on that road, irrespective of whether the identical bales are shipped or not. The total number of bales must be the same, but the same cotton is not required.

Warehouses in Large Interior Markets; Factors' Sheds.—The old system in the larger markets was for the factor to have his own sheds, or warehouses, built along the same lines as the small sheds in the country towns. Some of the large markets still have the old system. The buyer, having selected his cotton from the samples at the factor's office, sent down his ''reweigher'' to take up the cotton, that is to say to weigh it, inspect it, and sample it. After the samples had been classed the reweigher went back to the shed, marked the cotton up, and had it trucked to the press. The insurance rates were high, the storage was none of the best, and, finally, as room was almost entirely lacking in the quadrangle inside the sheds, the cotton was "lined up" for the buyer's gang in the street outside the sheds. It may be imagined this was a public nuisance, and, moreover, as the cotton had of necessity to be lined up in the gutters, the chance of damage was not small. I well recall a thousand-bale lot of cotton lined out for us in the street of a large southern city when I was on "reweighing." It had snowed over night, the cotton had an inch of frozen slush on the bales, and altogether the situation was not pleasant. Moreover, the cotton and ourselves took up all the sidewalk and much of the roadway, and the public, walking in the car tracks through the mud, was not sparing in comment.

New Warehouse Plants.—This sort of business was such a nuisance, and cost so much money in wet cotton and loss in weight claims, that finally large warehouse plants were built, with the factors' sheds under the same management. As an example of these new "model" warehouses let us look at the Memphis Terminal Plant. The buildings are low, built of steel and concrete and brick, in one-story sheds, with plenty of firewall protection between units. The land is outside the city, which reduces the conflagration risk always present when large blocks of cotton are stored in proximity to other buildings. The ground is sloping, with the factor's sheds at the top of the hill, the merchant's storage room in the middle, and the presses and shipping platforms at the bottom. This makes a gravity system of handling the bales possible, by means of an overhead trolley, running all through the plant, from top to bottom, with branch lines into all compartments. The bales are picked up by hooks, swung under a trolley on the overhead rail, and pushed down the hill by a mule. The saving in labor cost is enormous, for the mule will push a row of fifty or sixty bales down the line at a time. The bales can be switched for storage into the buyers' sections, or can be sent direct to the press for shipment. The Memphis plant has a high density press, so that cotton can be sent direct to Europe without additional compressing at the port, and still carry the high density differential.

Fire Regulations.—Every precaution is taken against fire, the no-smoking rule being enforced so strictly that matches may not be taken within the gates of the plant. There is a private fire department and private apparatus to control any fire before the City Department arrives. Every warehouse plant sooner or later has a fire, but no serious blaze has ever occurred in the Memphis plant owing to the excellent facilities for checking a fire at the outset. Insurance rates are low as compared to the smaller warehouses.

Warehouses in Other Cities.—It must not be supposed that this is the only modern compress and storage plant in the South, because a number of such warehouses have been built in recent years. The tendency is distinctly towards modern facilities for storing cotton. A partial list of the new plants may be given as follows: Atlanta, whose plant was used by the Government during the War and up to a recent date; Houston, Galveston, and New Orleans. The New Orleans warehouse is two storied on the Mississippi River, so that exports can be made direct from the press. The storage is excellent and there is an ingenious device installed for "breaking" cotton out of a tier without moving all the bales.

Northern Warehouses.—New York has a number of warehouses with moderate insurance rates, but the port badly needs a central cotton warehouse with better storage facilities. There are storage plants in many of the New England mill centers. As a rule the storage plants in the East are antiquated and unsatisfactory. Liverpool has large warehouse facilities. As Great Britain is an importing country, the cotton is concentrated at one port, which happens to be Liverpool, as that is close to the Lancashire mills. There are storage plants at the other European ports, such as Havre, Bremen, Hamburg, Barcelona and Genoa.

CHAPTER XIV

THEORY OF MARKETING

Theory of Marketing.—In theory the marketing of all staple commodities passes through certain well-recognized phases. The theory may be described as a progress from the grower to the small dealer or retailer, then to the large dealer or wholesaler, thence to the manufacturer, back through another set of wholesalers to the retailers, and so to the consumer. In our case it is perfectly possible for the original grower of the cotton and the ultimate consumer of the cotton goods to be one and the same person. In fact, you can see the cotton farmer, or his wife, on any Saturday afternoon in the season buying household cotton goods, and paying for them with the check he has just received for a bale of cotton.

The process of marketing cotton can be summarized thus:

1. The farmer raises his cotton.
2. He takes it to town and sells it to a small dealer.
3. The cotton is resold by this small dealer to a larger firm located at the large interior markets or at the ports.
4. The cotton then passes either direct from these wholesalers to the mill in Europe or at home, or goes to another wholesaler at the mill centers. There used to be an intermediate stage here, when the cotton stopped at the port before being shipped out, but that has gone by.
5. (*a*) The cotton is bought by the mill as a rule through its own immediate broker.
    (*b*) The cotton is made up into goods.
    (*c*) The mill sells the goods either direct or through a cloth broker.

6. The goods pass into the hands of the large wholesale jobbers. In the case of goods coming back from Europe the jobber may either import direct, or through an import house.
7. The goods are resold to the interior jobbers. As is the case with raw cotton, this phase may be skipped.
8. The goods are bought by the retailer either direct or through the interior jobber.
9. The retailer sells the goods to the individual consumer.

Such, in theory, is the progress of cotton from the South to the mill and back again in the form of manufactured cotton goods.

Actual Cross Currents in Marketing.—We shall find many cross currents, many modifications and many apparent discrepancies in our survey of the actual marketing. It is as well to bear the theory in mind, however, because the actual practice comes surprisingly close to the theory In fact, we shall better understand the whole matter when we reflect that the apparent departures from the schedule are really the means of simplifying the business and bringing it in conformity with the theoretical table given above. Take the factor as an example; he is gradually disappearing, but he is not needed as an original retailer. As a matter of fact, he was not a retailer at all, but simply one of the means by which the original dealer secured his supply of cotton. With his disappearance, the scheme of marketing becomes more simple, and more closely approximates the theory outlined. Another thought thus illustrated is the fact that changes come about slowly in trade, and are then easily arranged, whereas, violent changes by legislation or otherwise, cause much needless confusion and loss.

Time and Not Distance as Factors.—Fifty years ago merchants did business in terms of distance and to-day they do business in terms of time. This is a thought which it is difficult for the uninitiated to grasp at first, but it is the factor underlying all modern marketing. The telegraph, the cable, the telephone and the wireless have eliminated distance entirely as a market consideration. Cotton is no longer worth more money in Liverpool, simply because it *is* in Liverpool next to the Lancashire spinner, and not three thousand miles away in the South. At the close of the American Civil War, cotton commanded a premium at the port, because it was at the side of the ship, and cotton commanded still another premium in New York, Boston or Liverpool, simply because the bales were closer to the mill. Telegraphic communication on land was a novelty, telephones did not exist, the one transatlantic cable had failed, and as for wireless, that invention had never been suspected. The best to be had in the line of communication with Europe was the mail steamer, or the fast clipper packet. Cotton at the mill door was then the more valuable, because it had passed through the vicissitudes of transportation and was immediately available for spinning.

Relation of Markets.—In those days there was some faint and distant connection between the price of cotton in Georgia or South Carolina, and the price of cotton in Liverpool. The size of the crop would eventually exercise influence on prices, simply because the supply would be increased, or diminished. But, no one thought it possible the price in Liverpool on any given day should have any connection with the price at the farm in Georgia on that same day. Indeed, without a cable, and with a mail service taking from ten days to three weeks to cross the ocean, no one would know the Liverpool price until a month had elapsed. The situation to-day is far different, the price in Liverpool not on any one day, but at any given moment of that day, is known at the interior point in Georgia within half an hour. We shall devote a later chapter to a study of the relations between the world's markets, and to that trading between them, which goes on every day in the year. For the moment we need to realize their close connection only in a general sense. Of course, in figuring the price in each market, you must take into consideration the expense of getting cotton to that market. There are railroad and steamship freight charges, fire and marine insurance, exchange from American to foreign money, commissions and labor costs. All these are more or less constant factors known to the trade and constantly figured in to all calculations. When the cotton merchant talks of the "price in Liverpool," he unconsciously figures all charges. Once those charges are added, however, the world price of cotton tends always to be the same, no matter in what market the quotation is taken. There are fluctuations, markets like the ocean are never entirely still, but as the price moves in one market, so all others fall into line. This is the direct result of the modern means of instantaneous communication. One morning, there is a sharp advance in Liverpool. Manchester has had a demand from India and a large amount of cotton goods have been sold by the Lancashire spinner, for which he wishes to buy the cotton. This demand advances the price in Liverpool, which advance is instantly known in New York, and has an immediate effect upon the American markets. The Liverpool and New York quotations are known at Jville Georgia within five minutes, and the farmer, riding into town on a couple of bales of cotton, is accosted by a neighbor, with the remark "Liverpool is away up this morning, and New York is strong. You ought to get a better price than yesterday. The 'dope' says a big demand for goods from India."

Illustration from the War Markets.—In other words, the cotton merchant pays no attention to distance at all, he trades only in time. The fact that the telegraph wires are down, or that the cables are interrupted in Ireland, is of more importance than the fact that the demand comes from Japan, or from domestic mills. It was in just this sensitive nerve that the World War upset the markets. It was difficult and troublesome to get cables through to Europe, and the delays were excessive. The wires were overtaxed, governmental business held precedence, and the vagaries of the censors were a final handicap. The sign over the cable windows "All traffic to Great Britain subject to 30 mins. delay," or "All continental business subject to indefinite delay," means little to the average man, but to the cotton merchant, it meant an entire upsetting of his usual business methods. The balance wheel was lacking, and the resulting wild fluctuations in both Liverpool and the American markets exceeded anything ever known. As an illustration, we will recall the famous February 1, 1917, the morning after the German Government had announced its unrestricted submarine warfare. The South feared the immediate suspension of exports, and attempted to sell out all at once in the New York Market. Prices broke five cents a pound, and not an order from Liverpool had been received to check the decline. After the market had been open about half an hour, Liverpool rushed in with buying orders, and, the panic being over, no sellers appeared, and the price whirled upward again. Such an occurrence is unthinkable in normal times. The market, not affected directly by the panic, would turn up as an immediate buyer, long before any such decline had transpired. Another result of the War was the partial blockade on exports. It was no longer possible to secure freight room at will, and we reverted to the time when cotton commanded a premium at the ports. A ship, having to sail at once, and being without some portion of her War cargo, would accept cotton, provided the bales were put alongside the same day. The merchant would pay a premium for that cotton simply to catch the ship. That was a direct return to the old methods, because of war conditions.

Through Bills of Lading.—In the old days, the steamers did not go South as they do now, and cotton for quick shipment abroad came to New York in coast-wise vessels, was transshipped to the ocean liner in New York, and so accomplished the trip to Liverpool more rapidly than bales shipped direct from southern ports on a sailing vessel. The cotton was rehandled in New York, because the ocean ladings could not be signed until the cotton was alongside the steamer. A firm, called Williams and Guion, owned a line of steamers to Galveston, and also ran the Guion Line from New York to Liverpool. They devised the scheme of issuing a through bill of lading from Galveston to Liverpool, via New York, provided the cotton came up the coast in their steamers. Naturally this was an attractive proposition, for the merchant could ship his cotton all the way from Galveston to Liverpool on the one bill of lading, and without the necessity of reconsigning through New York. The other steamship people found that they must do the same thing, in order to meet this competition. Then the railroads began to object that they were losing all their long-haul business, and they insisted that the steamship lines should allot them freight room and allow them to issue through bills of lading from interior points. The modern practice is to do all export business from the interior in this manner. The merchant applies to the general Freight Agent of the road, and secures an export freight contract, naming either the steamer, or more often the line of steamers, and the port through which the cotton is to move. The Interstate Commerce Commission has rules in regard to the rates from the interior to the port, but the ocean rate varies with the supply of freight room and the demand. In Texas, in 1915, there was nearly as much trading in freight room as in cotton. Of course, the War put a stop to the through bill of lading, and then matters reverted back to the old practice of consigning to the port for export.

Port Markets.—During the War, some of the old time importance returned to the port markets, but the War has passed, and the movement towards the simplification of the marketing has resumed its even pace. The port market will always exist, but it holds no such important position as in the old days. A merchant can do an export business just as easily from Dallas, as from Galveston, from Memphis as from New Orleans. Occasionally the exporter at the port will get a better chance at some freight room, occasionally he will be able to save a bit by getting cotton of high density taken on a ship at lower rates. Otherwise, there is no difference between the port and the interior, and the old idea that cotton must stop at the port and be rehandled by a different set of wholesalers, in order to be exported, is a thing of the past.

Reducing the Different Classes of Merchants.—The tendency is slowly to reduce the different classes of merchants. The small retailer is slowly swallowed up in the wholesaler, while the latter comes steadily closer to the farmer. With the telephone, a merchant can sit at his desk in Memphis and buy cotton all over Mississippi, Arkansas, and Tennessee. The unsuccessful retailer in the small town becomes the agent or buyer for the wholesaler, the successful small merchant extends his business, uses the telephone in his turn, and becomes a large dealer. You must realize, that while the theoretical distinction between different classes of merchants is correct, the modern tendency is for the individuals to coalesce, so that one cannot take X and Co., and say they are only retail buyers. X and Co. do a small export business, and that necessitates an explanation. The tendency is to simplify the system, to get back to the farmer for the cotton in the first instance, and to deal with the mill, in the last. The final elimination of intermediaries is to be found in the southern mill, when it buys direct from the farmer whose field adjoins the mill. It is not likely, however, that the dream of the spinner dealing directly with the farmer will ever come to pass, save in some such exceptional case, for the reason that the spinner must have even running cotton, and that does not come with the "run of the receipts," but must be carefully selected out by the merchant.

CHAPTER XV

MARKETING

Small Towns.—The first retail cotton markets are to be found in the small towns, to which the farmers bring their bales for sale, after they have been ginned. These towns are very numerous and to attempt to list them would be impossible. The old-fashioned town in the Atlantic, and the older towns in north Texas, all had a large square in the middle of the place, with stores around it on all four sides. When the town is a county seat, the county buildings are either in the center of the quadrangle, or in one of the sides. On any afternoon in the fall, but more especially on a Saturday afternoon, you will find the square packed with farmers' wagons, each with one or two or three bales of cotton. This is called ''wagon cotton'' to distinguish the bales from those which arrive in the larger places by rail.

Country Merchants.—The first retail dealer is our old friend, the country merchant, the supply side of whose business we have already considered. He must now resell the cotton, which he has bought from the farmer. The latter first visits the country merchant, and, if he still owes an account, they agree upon a price for the bale, and it is credited to the farmer's account. If the bill has already been paid, then the farmer will offer the merchant his cotton, but they do not always agree upon the price, in which case the farmer may leave the cotton with the country merchant to be sold on commission, or he may try to sell it himself, ''off the wagon'' in the village square.

In any event, here we have the country merchant engaged in the merchandising of cotton. He is the original "retail" dealer, for he acquires his cotton in small quantities and he resells in the same manner. I have bought cotton in the front of his store, and waited until he finished selling an old lady a package of pins, before he had leisure to sell me two or three bales of cotton. In the first instance, he sells to the small local buyers, or to the local representative of some larger firm. The latter may have an office in the same town, or he may have his office in a neighboring place. In these days of long distance telephones and automobiles, it is possible for the larger firm to direct the movements of their buyer, and thus have him personally cover a wide range of territory around the town, in which he may be located.

Country Merchant as Agent.—It is not long before the country merchant begins to look around for a better outlet for the cotton he has for sale. He may start a "Cotton Department" of his own, and set out to do a general mercantile business with the cotton, offering it himself to domestic mills, and to Europe. If he attends to this new business carefully, studies the matter of hedges, and really understands the game, he will soon cease to be a country merchant at all. Some of the largest cotton merchants in the South were originally country merchants, and grew away from the store, in which they started. On the other hand, the average country merchant does not understand the cotton merchandising business, and is too well occupied with his own trade to learn. In that case, either his cotton department gets into trouble and is abolished, or else he has the ability to realize in the first place, that he cannot conduct such a business successfully unless all his attention be given to it. In either event, he soon finds that still another method of selling his cotton is open to him. He becomes a sort of quasi agent of the cotton merchants in the nearest sizable market. To them he offers his cotton over the telephone, and either they take his description and buy it from him at once, or they agree upon a price, subject to the inspection of their buyer who shortly arrives in his automobile to look at the samples.

Where the firm finds the country merchant a good judge of cotton, honest and energetic, the connection may be of much mutual benefit. The firm will buy from him freely on his description, and thus secure cotton which they might otherwise lose, and, on the other hand, the country merchant can expand his business because he always can resell the cotton he buys. The merchants will give him limits of price on which to buy, and will take all the cotton he can give them at the figures named. They are not interested whether he sells them cotton he has taken to account, or whether he buys the cotton in the country, nor do they care what profit he makes, if only the grade and staple are up to description, and the price is within the limits named. In this manner the country merchant often has a considerable business as a sort of semiagent of the larger firm.

Street Buyers.—In all these small towns, there are other retailers, known as ''street buyers,'' or sometimes as ''spot speculators.'' These men have only a limited capital, and they can borrow only a limited amount at the local bank. They will buy from the tables of the country merchant, and from the farmers' wagons in the square, and will resell to the larger firm, either direct over the phone, or through their local representative. As a matter of fact, all these small buyers attempt to do is to ''scalp'' the market, that is to say, to make a small profit between the farmer or the country merchant on one hand and the wholesale dealer on the other. These small retailers are none too popular. The farmer complains that they buy his bale a quarter or half a cent below the value of the cotton, and resell at that profit, or more, to the merchant. The wholesaler complains, that they run around ''bulling'' the market on him. Both are a bit unjust, for the small dealer fills a want, or he would not exist. He is valuable to the farmer, because he is always willing to run a risk as long as the bank will finance him. He will buy the farmers' cotton when other dealers are out of the market. To the wholesaler, he is of advantage, because he will often have for sale small amounts of cotton, which cannot be otherwise obtained in the local territory. These street buyers all have a tentative outlet with an eastern firm of spinners' brokers, or with a southern mill. They always hope to become wholesalers themselves. Very often this proves to be the case, but in that event, they cease to be street buyers.

These small buyers are a serious menace to the market at the end of a period of rapidly rising prices, because they are always over-extended at the top. In that they do not differ from their larger neighbors, but the banks feel that they can afford to force the smaller loans, and the consequent liquidation of the street buyers always is a phenomena of such times of crisis as 1920. On the other hand, the inability of the street buyer to secure money in times of trouble, such as 1914, always aggravates the farmers' lack of a ready market.

Larger Interior Markets.—It is impossible to define just when a town becomes a "larger interior market," for the gradations are very slight. Still we can say that the larger market has a compress and warehouse plant, supply merchants as well as country merchants, and also several wholesale dealers. In the old days, the amount of cotton handled in the town was a determining factor, but the telephone has so altered business methods, that it would now be better to say that the amount of cotton to be handled in the tributary territory is the determining matter.

Supply Merchants.—These larger interior markets have their country merchants and they also have supply merchants, doing a wholesale business with the smaller towns, as well as a business with the farmers in the immediate vicinity. The country merchants need not be again considered. The supply merchants do pretty much the same business, except that they have more cotton for sale, and except that they will take cotton both to ''account'' and to sell on commission, from their country merchant customers in the small country towns. In fact, these supply merchants are very often closely akin to factors.

Cotton Buyers and Shippers.—These are the first real wholesale dealers in marketing the cotton. The terms are synonymous, indeed, you will often see both words on a firm's letter head. They buy the cotton from the various retailers, class it out into even running lots, and offer it for sale to domestic mills and to Europe. Methods of doing business vary a good deal with each individual firm, but, generally speaking, all these merchants do business in much the same manner. They buy the cotton from the farmer direct, from the street buyers, from the country merchants, and from the supply merchants in the larger town. Often they will have branch offices all through the section which they consider their ''territory'' and, as we have seen, they have many agents and semiagents scattered around through the small towns. As a rule they concentrate their cotton at several points where compresses are located, and where they can take advantage to the full of the ''concentration rates.'' The classing is usually done in the ''home office,'' each branch sending in tagged samples of the cotton purchased. In this manner, the classing and stapling is all under the supervision of the partners and there is more regularity. Another advantage of such concentrated classing is that the buyers, the agents, and the branch office managers can be checked up on their class from time to time. The valuation of the cotton purchased is as important as the valuation of the cotton shipped. The one means a full return for the money expended, the other means satisfied customers, and small grade and staple claims. A reckless buyer may cost a firm a large sum of money, if his tendency to "overclass" his purchases be not discovered and promptly checked.

The home office also does all the selling. That is, they receive all bids from the East or from Europe, and they also make all offers. The senior partner may have charge of this department, or he may have general charge of the classing, but, in any event, it is a partner who does the selling. The home office has various methods of knowing just what cotton is on hand, just what cotton can easily be bought in the country, and just about what "basis" must be paid for different varieties. We will leave the matter of price and "basis," for the moment, because we must understand "hedging" in order to comprehend the method of pricing purchases and sales, and to understand hedging, we must have studied the "future contract markets."

Selling Cotton.—These firms sell cotton all over the world. They sell southern mills both direct and through brokers; they sell New England mills through spinners' brokers at Providence, Fall River, New Bedford and Boston; they sell the Middle Atlantic mills through brokers in Utica, Amsterdam, Philadelphia and New York; and finally, they sell importers at Liverpool, Bremen, Havre, Barcelona, Genoa, Zurich, and Yokohama. In short, these wholesale dealers do a world-wide business, and are in every sense cotton merchants.

Finances.—It must be understood that cotton is a "cash crop" and all cotton is paid for in cash on the spot. There are no questions of discounts, and "10 days," or "30 days," or what not. When a farmer, a factor, or a merchant sells a bale of cotton he is reimbursed in cash. These wholesale firms, then, must borrow a great deal of money, when cotton costs $100 a bale. This financing they do in the form of either time loans or demand loans, in either case secured by such securities as the firm may own, and by warehouse receipts for the cotton handled. There are many different ways of changing these receipts about in loan envelopes, in order to facilitate shipments, but the details need not concern us. The merchant does business first with the local bank, and then with the bank in the nearest city, and finally, in the case of large firms, the loans may be found in the larger financial centers.

Federal Reserve System.—The Federal Reserve System has much eased up the old-fashioned financial stringency at the opening of the crop moving season in the fall. It has also altered the old methods of financing cotton merchants in the interior. No longer do we have the old-fashioned "overdraft" in the smaller banks. The banks must have notes and proper paper if they are to "rediscount," and this has stopped the open overdraft. Not only can the local bank get its paper rediscounted through the Federal Reserve Bank, if it is a member of the system, provided the paper agrees with the regulations, but it is also possible for the merchant to finance himself with acceptances. In other words, he enters into a contract with a mill to supply 500 bales of cotton, shipment within six months. He can buy and get ready for shipment the first lot of one hundred bales, draw on the mill, have the draft "accepted," and discount that acceptance with his bank, thus putting himself in funds to continue his buying. The same thing has been done in Great Britain for years, as we shall see.

Rediscount.—The cotton merchant's paper is suitable for rediscount with the Federal Reserve Banks, and this makes it easier for the local bank to finance him, than used to be the case. The regulations are as follows, omitting those which do not concern us:

> The Federal Reserve Board, exercising its statutory right to define the character of a note, draft, or bill of exchange eligible for rediscount at a Federal Reserve Bank, has determined that:

(*a*) It must be a note, draft, or bill of exchange which has been issued or drawn, or the proceeds of which have been used or are to be used in the first instance, in producing, purchasing, carrying, or marketing goods in one or more of the steps of the process of production, manufacture, or distribution, or for the purpose of carrying or trading in bonds or notes of the United States.

(*b*) ......

(*c*) ......

In addition to the above definition the Federal Reserve Board has made general regulations regarding the eligibility of paper presented for discount. They are as follows:

Any Federal Reserve Bank may discount for any of its member banks any note, draft, or bill of exchange, provided:

(*a*) It has a maturity at the time of discount of not more than 90 days exclusive of days of grace, but if drawn or issued for agricultural purposes or based on live stock, it may have a maturity at the time of discount of not more than six months, exclusive of days of grace.

(*b*) It arose out of actual commercial transactions; that is, it must be a note, draft, or bill of exchange which has been issued or drawn for agricultural, industrial, or commercial purposes, or the proceeds of which have been used or are to be used for such purposes.

(*c*) ......

(*d*) The aggregate of notes, drafts, and bills of exchange bearing the signature or indorsement of any one borrower, whether a person, company or corporation, rediscounted for any one member bank, whether state or national, shall at no time exceed ten per cent of the unimpaired capital and surplus of such bank; . . .

(*e*) It is indorsed by a member bank.

(*f*) It conforms to all applicable provisions of this regulation.

It is understood that the merchants' paper is satisfactory from a credit point of view. Moreover, it must not be forgotten that the merchant himself cannot go to the Federal Reserve Bank. His paper in the first instance is placed with his own bank, and it is this bank, which, if a member of the system, can get the rediscount.

Interior Shippers' Office.—I was once employed in the cotton room of one of these interior shippers, and a brief description of the actual workings of such an office may be of interest. The firm had a main office, one branch in charge of a resident partner, and four branches in charge of managers. The branch in charge of a partner bought cotton without consultation with the home office, except in the line of reporting purchases every afternoon. The others bought on instructions, that is to say, they were told what character of cotton was needed and what they were to pay for it. The manager also had discretion in buying additional cotton he deemed a good purchase, but he could not buy above a certain amount without specific instruction which he could obtain by telephone. All purchases were reported by a certain hour in the afternoon, and no buying was permitted thereafter, except by special and specific permission of the home office. One of the partners in the home office attended to all the out-of-town buying, the branch offices, as well as the agents, country merchants, and buyers sent out on special lots.

After purchase, the cotton was concentrated at the nearest compress point, inspected, reweighed and resampled, the tagged samples being sent to the home office for class and staple. There were two classers, each with an assistant, the assistant of the head classer being "sample-man," in charge of all samples. It was his duty to see that each and every bale bought was represented by a sample, that the sample went to one or the other of the classer's tables, and that the bale was properly listed in accordance with the grade and staple given it. There was a partner who made up shipments on the orders and was in general charge of the classroom. The head classer was held strictly responsible for the grade and staple, and all "claims" for off class or off staple received from mills, were referred to him for observation. It was the business of the partner in charge of shipments to know just what cotton would suit the requirements of the orders. He picked out the lots from the class lists in the cotton room, and the accounting department made up the shipping papers, invoices, weight sheets, drafts, bills of lading and so on. There was a partner in charge of the accounting department, who was responsible for seeing that these papers were made out properly. He was also responsible for the financing, in the sense that he acted as cashier, kept the books, kept track of the bank balances and loans, and, when in need of funds beyond his ordinary channels, consulted with the senior partner.

At the top of the office was the senior partner, the largest owner of the business. In my office, he was an excellent buyer, and spent a large part of his time supervising the purchases of cotton. He also attended to all the hedging, about which we will hear so much later on, and was the final authority on the finances. My senior happened to be an excellent staple man, so he looked over again all "staple" cotton classed in the room. In other offices, some other partner would probably be the staple man. In those parts of the belt where any amount of extra cotton is handled, there is always such a partner, since the reputation of the firm as "good shippers" depends upon care in that department. Also the losses run into money fast, because of the premiums prevailing on any cotton longer than the ordinary.

The partners, sometimes all, and sometimes merely the senior and the shipment man, held a consultation every night. They had before them the list of cotton bought that day from all points, with a statement of the grade and staple for which it was purchased. They also had a tabulated report of the "classed" cotton on hand, showing the number of bales of each grade and staple carried in stock at each point. They had a list of orders to be filled, and also a list of the future contracts carried as hedges. With this data, and after consultation, they made up the offers, which were sent East and to Europe by wire and cable that night. In the morning they had replies to these offers and also inquiries from their brokers and connections. They decided which offers they would accept, and then, taking into consideration their exact situation, they would make up the instructions for the branch offices to follow that day, also giving them the "limits" on which they were to buy.

In the rush of the season, the office force at headquarters worked very hard, because it is of great importance to move your cotton out and keep down your charges. In the same manner, the cotton room was pushed as long as the light permitted classing, because unclassed cotton cannot be shipped and is simply eating up interest and storage charges. The office was open at seven in the morning and closed as soon after midnight as we could get through. We also worked Sundays pretty regularly in the fall. On the other hand, in those days, cotton was all out of the country by February, and the rest of the year was easy sailing. Conditions have changed very much in recent years. There are, of course, periods of "rush," but the business is much more evenly divided over the year than used to be the case.

Methods will differ with every firm, and it is not infrequent to find an interior shipper with two main offices, each running independently of the other, each in charge of a partner, and only connected by the firm's interest and by the fact that orders impossible to fill in one office will be turned over to the other. It must not be supposed that the sketch given above of one of these interior shipper's offices is all embracing. It will serve, however, as a picture of the work carried on by some system in every cotton office in the South.

Foreign Shipments.—When the cotton is sold to a domestic mill, the draft is simply attached to the bill of lading, and deposited to the shipper's credit in the local bank. The order will give instructions on whom to draw and the rest is very simple. With export cotton, the matter is more complicated. The shipper is given a "reimbursement," that is to say, he is instructed by cable on which bank in London, Liverpool, Paris, Berlin, or Rome he is to draw. When the time comes to ship the cotton, the merchant wires his "foreign exchange" broker in New York to sell exchange against so many bales of cotton. The broker wires back the details of the sale, the name of the purchaser of the bill and the New York bank upon which the domestic draft is to be drawn, the rate, and the time within which the draft must be sent to New York. The merchant then draws a domestic draft upon the bank named in New York, figuring the value of cotton from dollars into sterling at the rate of exchange named, and attaches to his domestic draft the following documents: a "first" and "second" of foreign exchange drawn upon the reimbursement given him from Liverpool, when the sale of cotton was made, two original bills of lading, two insurance policies, and sometimes what are known as "hypothecation papers," giving authority to sell the cotton to protect the drafts. All these papers are drawn to the order of the shipper and he must indorse them all. The foreign drafts are drawn to the order of "ourselves," the ladings are "shipper's order, notify," and the insurance policies are to the "order of X and Co." In this manner the shipper's responsibility for the value of the draft continues until it is paid in Europe, a fact brought home in unpleasant fashion to some shippers in 1914, when their foreign drafts came drifting back home to be paid, at a time when no one knew where the actual cotton was. In Great Britain, the foreign draft is presented, and the "second (or first as the case may be) being unpaid," the merchant accepts the draft which is then rediscounted by his bank and carried until the due date, 60 days or whatever it may be. These accepted drafts are bought and sold regularly in the English money markets.

Abnormal Exchange Situation.—The procedure outlined above worked smoothly in a normal exchange market, but as the Government support was withdrawn in 1919, the exchange market has since been very far from normal. As soon as the foreign Governments withdrew their support, or as the trade put it, as soon as "they pulled the plug," a severe decline took place in the value of all foreign currencies. Some have since recovered somewhat, and sterling is three-quarters of the way back to normal. The fluctuations have been severe and the losses incurred under the old-fashioned system of foreign sales very great. A friend of mine, for example, in the summer of 1919, lost all his profits and something more on a sale to Italy, simply on the decline in the lira. He had sold the cotton to net him over ten dollars a bale profit, but could not get his ladings signed for some time because of a longshoremen's strike in the southern port. He was delayed some weeks, and in the meantime the lira declined so that he lost all his profits and something besides. Selling cotton to Europe became nothing more or less than a speculation in foreign exchange. In fact, some merchants deliberately sold exchange short in the early summer on the theory that the weight of cotton and grain bills would cause a decline in the fall.

Temporary Expedients to Meet Exchange Situation.—Various methods were devised to cut these exchange losses down. The merchant in offering to the other side would allow himself a wide margin in the price to take up any possible exchange loss. Another scheme was to sell "cash

New York against documents,'' that is to say, the shipper was paid by a specified bank in New York, which received the signed export ladings and insurance policies. Various methods of ''credits'' were devised, whereby the foreign buyer put a credit with which to buy the cotton in this country at the disposal of the shipper, the foreigner then arranging with the bank as to shipment and exchange. These expedients still continue to be used, and it is possible that we may have a permanent modification of the old system. It is more likely, however, that as exchange returns to normal, the methods will once more return to the same system as before. One change deserves to be noted, and that is that certain of the trust companies and banks in New York, large dealers in foreign exchange, have arranged to have their correspondent banks in the interior of the South, quote foreign exchange, and buy foreign bills. This is a convenience to the merchant and is more than likely to remain.

List of Large Interior Markets.—The following list is by no means complete, and will be added to each year, but it will serve to show the character of the markets we have been describing: Charlotte, Greensboro, Raleigh, North Carolina; Spartanburg, Greenville, Columbia, South Carolina; Rome, Atlanta, Macon, Albany, Georgia; Decatur, Birmingham, Anniston, Selma, Montgomery, Alabama; Corinth, Columbus, Meridian, Vicksburg, Greenwood, Yazoo City, Mississippi; Newport, Van Buren, Fort Smith, Little Rock, Pine Bluff, Helena, Texarkana, Arkansas; Shreveport, Monroe, Alexandria, Louisiana; Gainesville, Sherman, Paris, Greenville, Waco, Fort Worth, Abilene, Austin, Temple, Taylor, San Antonio, Brownwood, Texas. We might also include the following ports in the list as being markets of just about the same size, namely: Wilmington, Charleston, Mobile, and Texas City.

CHAPTER XVI

LARGE WHOLESALE MARKETS

List of Markets.—The very large markets of the South are, in the interior, Augusta, Georgia; Memphis, Tennessee; Dallas and Houston, Texas. Of the ports, the largest wholesale cotton markets are Savannah, Georgia; New Orleans, Louisiana; and Galveston, Texas. We may also mention St. Louis, which was formerly a large interior market, and where is still located the main office of two large wholesale merchants. The actual cotton business done in St. Louis has dwindled to comparatively small proportions. At one time, Cincinnati, and to a lesser degree, Louisville, were large interior markets, but the business long since left those places.

Differences with the Smaller Markets.—Substantially the business, while on a larger scale, is the same as that of the smaller markets we have just studied. There are, however, certain differences to be noted. The country merchant is missing, and the supply merchants do not handle cotton as a rule. The cotton is sold by the factors, who still handle a good deal of cotton from the country tributary to the city. The business is controlled by the local Cotton Exchange, to whom belong all the factors and merchants. The shippers go around the market, and, from the tables of the factors, select the cotton they wish. The bales are turned out for them at the factors' sheds, or in the portion of the general warehouse assigned to the factor. Here the buyers' reweigher "takes up" the cotton, that is to say he inspects it, reweighs it, and resamples it. In case of dispute as to "wet," or other details of the sale, the rules of the local Exchange apply. No non-member can buy cotton in the market, but must trade through a member of the local Exchange.

Wholesale Dealers.—The firms handling cotton at these large markets do the same business we have already observed in the case of the wholesalers in the smaller towns. Of course, it would be absurd to say that the firms in the large markets are all large dealers, for they are of all sizes, but the tendency is for the very large shippers to come to the large market. They drift in, if for no other reason, because the banks are larger and afford better opportunities for financing. The firms in these large markets buy the most of their cotton off the factors' tables, but they also do business in the country, have their own branch offices, and their own agents, much as did the firms we have already found in the country. Some of the very large firms have started their own branch offices in the mill centers at home and abroad for the purpose of selling cotton "direct" in competition with the usual spinners' brokers. These offices are also expected to advise the home office fully in regard to market conditions from the spinners' point of view.

Finances.—The wholesale dealers in the large markets do their financing in much the same way, as do the firms in the smaller centers, only as the banks are larger, they are able to do most of their business with one institution. On account of the enormous premiums it has become very risky to lend money on cotton, unless some idea of the grade is given. In some of the large interior markets, the local Exchange furnishes inspectors to look at the cotton when being received by the merchant, and give him a certificate that the bales are above middling, or above a certain grade, as the case may be.

Large International Firms.—There are a number of firms, English, American, and Japanese, which may be said to be international in their scope. They buy their own cotton in the United States and they sell their own cotton abroad. They deal in all kinds of cotton, foreign growths as well as American, and have offices and agencies all over the world. In this country they have both branch offices and agencies. The branch office is in charge either of a resident partner or of a manager with an interest in the business. Sometimes these offices are strictly branches, that is to say, they merely buy cotton on instructions of the head office in Europe or in the United States, offer cotton to that office and do no business elsewhere. Sometimes the branches do business on their own account with spinners' brokers in the East and with southern mills, as well as doing business with the parent firm. There is usually, but not invariably, a rule that the orders from headquarters must be given preference. The agencies are rather differently constituted. Sometimes they are almost branches and do almost all their business with the home firm. Sometimes the connection is rather distant, and they simply give the preference to the orders of the firm, in return for similar preference granted their offers in turn. The finances of these agencies and branches also vary a good deal. Sometimes they are exclusively financed from the other side and do very little of their own borrowing. More often, the branch does all its own financing, outside the original capital given it with which to operate. As a general rule, whenever a branch or an agency is compelled to do a business outside its ordinary ability the additional capital is supplied by the head office. It may happen, for example, that a certain character of cotton can be obtained only in the territory of a certain branch, so that the office is called upon to pay for much more cotton than it would in the ordinary course of business. Then the head office will arrange the greater part of the additional financing.

Head Offices of Foreign Firms.—These are usually located in one of the larger markets, so that the head office in this country can be in a position not only to obtain funds easily, but also to do a considerable business on its own account. Very often the money needed from the other side is sent in the first instance to this head office, and then distributed by the resident partner to the various branches. The necessary financing of future contracts is also done through the head office. In short, it is a sort of clearing house for the business of the foreign firm in this country. The large American firms, with an international business, may have their head office in one of the large southern markets, or in one of the eastern cities.

New Methods in Factorage Business.—We have already referred to the "fob" business done in these large markets, whereby the samples are sold off the factors' tables, but the actual bales do not come into the market, but are sold "fob" at some country point. A great deal of this business is done, and there are firms of wholesalers who sell cotton to other merchants in addition to their regular business. Some of these firms even do a factors' business, except that they do not sell on commission. They will go into the country and buy cotton, having the bales shipped into the larger market, and then selling them by sample off their tables, just as the factor does his customers' cotton. They also do a general merchant's business, and sell the cotton East or to Europe, or locally off the table, as they deem most profitable.

Specialists.—There are firms in these larger markets which make a specialty of certain lines of the business. For example, in Memphis there are firms making a specialty of long staple cotton, and doing almost nothing else. There were firms at Savannah who specialized in Sea Island cotton. All the ports have firms who make a specialty of exporting and do little or no eastern business. They take advantage of sudden offers of freight room and of the lower rate on high density cotton.

Freight Brokers.—At the ports are firms of freight brokers who make a business of engaging freight room for clients in the interior. They will keep them posted as to the room offering, as to rates, and also as to the probable movement of freights, the amount of room likely to be offered in the immediate future, and other information as to the transatlantic freight market. These firms will also attend to high density compression. The cotton may be consigned to them, they will have it recompressed, put aboard ship and the ocean ladings signed. Buyers in Europe are often anxious to know the exact date at which the cotton left this side, and require a ship's bill of lading, or, as it is called, a "port bill of lading." The English law requires that goods must be within "reach of the ship's tackle" before the captain can sign bills of lading. Consequently, to obtain port bills of lading the cotton must be delivered alongside the ship. The freight brokers will receive cotton consigned to them from the interior, will attend to getting the bales alongside the ship, and will take out the needed ship's bill of lading and return same to the shipper in the country market. Some of these freight brokers have recently taken to quoting foreign exchange, and it is possible they will become active competitors with the New York exchange broker, although the latter market is so much broader that this does not seem likely.

CHAPTER XVII

SPINNERS' BROKERS

Spinners' Brokers.—As a general rule the mills both at home and abroad do not buy their cotton direct, either of the producer or of the merchant in the South. They much prefer to have an intermediary broker who will be in close touch with them, who will know exactly the character of cotton they require, and who will attend to the receiving, tabulating, and comparing of the offers from merchants all over the South, in order that the most advantageous purchase may be made. These are called "spinners' brokers" and are to be found in all the mill centers in the United States and also in Liverpool, and on the Continent. The domestic spinners' brokers vary in their methods from those in Liverpool, so we will take up the American brokers first.

New England Spinners' Brokers.—Through a curious form of organization the "Treasurer" of a New England mill is both the buyer of the raw cotton and the seller of the goods made out of that cotton. This imposes upon him a double set of duties which are almost too much for any ordinary man. The cotton market and the cotton goods market are naturally connected, since a permanent advance in the price of the raw material must be reflected in the price of the finished product. On the other hand, intermediate fluctuations in either market frequently occur with but little reference to the other, so that it takes a great deal of skill to ride both the horses at the same time. In addition to this difficulty, the treasurer is too busy to be troubled with getting into touch with merchants all over the South, making them bids, receiving their offers, and deciding which cotton to purchase. He relies upon the spinners' broker to attend to these matters and to give him each morning the best offers received for the character of cotton he uses.

On the other hand, the southern merchant needs some one to represent him in dealing with the mill, to attend to the selling, and to advise him as to the state of the market for certain kinds of cotton, to look out for his interests in relation to grade and staple claims, and generally to act as his agent. The merchant employs a spinners' broker to attend to all these matters for him, and pays that broker a commission on each bale of cotton sold through him to a mill.

Another valuable service is rendered the shipper and the mill by the broker, and that is the "personal touch," which is always helpful. The southern merchant makes an annual trip to the East, which trip, if he be an exporter, he extends to Europe. While in the East he calls upon his spinners' brokers and talks over the past season with them and makes arrangements for the coming year. The objections raised to any of his shipments of the past season are gone into, and the reasons for the mills' complaint are investigated. If possible, the broker will take the shipper around to see the treasurers of those mills with whom he has done an especially good business, and the shipper and the treasurer can thus get a personal acquaintance which will often ease up situations through the year.

Mills and Futures.—The cotton business as conducted to-day cannot continue without the use of the future contract markets. The requirements of modern business, dealing in time and not in distance, compel every one in the trade to recognize the necessity of hedging, however much they would prefer to ignore the practice. To the New England mill treasurer, hedging usually appears as an additional and annoying problem. To an old-fashioned

Board of Directors losses taken on future contracts in the ordinary give and take of the business are difficult to explain. The treasurer cannot safely sell his goods forward without some sort of protection, but he much prefers not to handle that protection himself. He can usually make a contract for cotton with some southern shipper, who will agree to deliver at a price and will attend to the hedging himself. Frequently, however, he cannot get such a contract, or cannot get it at a price he deems satisfactory. He must obtain protection himself, and once more the spinners' broker is a most useful intermediary. He will attend to the futures for the mill, either carrying the account in his own name, or else arranging for the sale with some one of his other merchant customers in the South.

Spinners' Brokers as Merchants.—Probably due to this last service rendered the mills by the broker has grown up the practice of having spinners' brokers act as merchants as well as brokers. They will make forward contracts with the mills, hedge themselves with futures, and buy the cotton themselves in the South. There are firms which do a very large merchandising business in addition to the brokerage business. Some of these firms have become exclusively merchants, never selling the mills cotton except in their own name, dealing with their southern customers only as merchants and no longer as brokers. They do not offer cotton to the mills for the South. They buy the cotton outright in the South, and themselves offer it to the mill. Of course, in this manner they are perfectly willing to do all the hedging the mill needs, or they are perfectly willing to sell the mill any sort of "forward" cotton, provided the price is satisfactory.

The tendency for the New England spinners' broker to become a merchant rather than a broker is marked. There are few firms to-day which do an exclusively brokers' business. There are firms which have divested themselves entirely of the brokerage business and become out-and-out merchants. The spinners' broker, as a broker, may be disappearing, but the spinners' broker as a merchant is likely to last a long time, for he performs a real service to both the mill and the shipper.

Southern Selling Agencies.—One or two of the very large American firms have always maintained branch offices at important mill centers for the purpose of selling the mills direct. This selling branch idea has now been taken up by the rather smaller firms and there are quite a few selling agencies in the eastern markets. The future of these offices depends largely upon whether the New England treasurer will care to deal with them or the New England firms with whom he has traded for so long, and who probably know him much more intimately than the newcomer.

New England Mill Markets.—The New England markets are: Boston, which is probably the largest, and where are located more spinners' brokers than elsewhere; New Bedford, where the mills have always done a fine goods business, so that the market is largely one of extra staple; a good deal of Egyptian cotton comes into New Bedford every year; Fall River, where, in addition to the usual run of the trade, many print cloths are made, so that Fall River has always had a good market for the lower grades; Providence, which is close to some of the largest groups of mills, and which is the last of the large New England markets. We may also mention Norwich, Conn., which is near a group of mills, among whom are some users of extra staples; and North Adams, Mass., another staple market.

It must not be supposed that all the New England mills deal only through spinners' brokers. There are two or three very large mills which do their own buying direct with the southern merchant, and which do their own hedging when they cannot get the cotton offered to them from the South. These mills usually have a separate organization for buying and selling. There are other mills that do business direct occasionally, and through spinners' brokers most of the time. There are still others which do their buying entirely through spinners' brokers, but handle their hedges direct with the New York future broker. In short, you can find all sorts of methods in use. We have merely studied the most usual system.

Middle Atlantic States.—The same system of spinners' brokers prevails, but the relation between the brokers and the mills is not so close, speaking generally, as is the case in New England. Also there are more mills which deal direct either with the South, or with some of the large American firms having their headquarters in the section. The Middle Atlantic markets are: New York City, where are located spinners' brokers who not only sell cotton from the South, but also sell cotton out of stock in New York warehouses; Philadelphia, which has several spinners' brokers, and is also the headquarters of one of the largest American merchants; Amsterdam and Utica, which do business with the mills in the central part of New York State. Some of these mills are hosiery mills, and therefore use very particular cotton.

Canada.—The Canadian mills as a rule buy either through Boston or through the markets in central New York. There are also some brokers in Montreal.

Southern Mills.—The southern mills do business quite differently from the mills in New England. Many of the smaller mills were organized entirely by local capital, and do all their buying locally. Very frequently the merchant, located in the town, has a considerable amount of the mills stock, so that he controls all the buying. Very often these small mills will buy direct from the farmer, who brings his cotton to the mill door on the wagon. The larger mills do business direct with merchants through local spinners' brokers, and to a limited extent buy the wagon receipts, where the grade is suitable. In one respect the Southern mills differ entirely from New England. Having been started more recently, and almost invariably having cotton merchants on their Board of Directors, they know all about futures, and never hesitate for a moment to buy or sell future contracts, either in New York or New Orleans, when, in their judgment, they can thus obtain the best protection.

Southern Spinners' Brokers.—These are to be found in the southern mill centers, Charlotte, Greenville, Spartanburg, and Atlanta. There are some out-and-out brokers selling certain mills exclusively on commission. As a rule, however, these southern firms are merchants first and brokers second, if indeed they can really be said to be brokers at all. They sell their own cotton to the mills, and when they handle cotton for shippers elsewhere in the belt they usually buy it as merchants and resell to the mill. Also, quite unlike their New England brothers, they will often do an export business in addition. Indeed, these southern firms often do business with New England mills as well as with the South, selling to the New England spinners' brokers like other shippers.

Foreign Markets.—There is one underlying difference between the American markets and those on the other side. This is an exporting country, and cotton leaves through any and all ports. The result is that both the mills and the merchants are scattered all through the country and are not centralized in any one large market. All European countries are importers, so that the cotton naturally comes to one, or at most, two ports, and all the business is centered in those markets. For it is there the cotton is unloaded from the ships, and it is there that the surplus stocks, to last over from one season to the next, are carried in store by the importing merchants.

Foreign Spinners' Brokers.—These again differ from similar firms in the United States, because seldom, if ever, do they deal with the southern merchant. They do their business with the importer at their own port, and he gets the cotton from the South. All the spinners' broker does is to buy for the mill the cotton offered for sale in the home market by the merchants, who brought it from the South. In addition to this, the spinners' brokers often handle the future contracts for the mills.

Liverpool.—This is the cotton port for Great Britain, and this is probably the greatest cotton market in the world, for Liverpool not only handles American cotton, but also cotton from every country where the staple is raised. There are large warehouses and the stock of American cotton carried in Liverpool is always large. In 1919-1920 the stock of American in Liverpool ranged from 517,000 bales on August 1 to 930,000 bales on May 14, 1920. In 1920-1921 the stock of American ranged from 443,000 bales on October 29 to 722,000 bales on July 15, 1921. From February 25, 1915, to August 13, 1916, the stock of American cotton in Liverpool was always above a million bales. It will be seen that the Liverpool market is of importance.

The system in Liverpool differs a good deal from the American method of selling cotton to the mills. This is due in large part to the fact that, as the cotton is imported, all the various classes of merchants are collected in the one market. In a later chapter we shall look into the Liverpool market in detail, and do not need to do so here. The nearest approach to the American spinners' broker is to be found in the "buying brokers" who act for the Manchester mills. The English spinner buys practically all his cotton through these men, seldom dealing direct with the importing houses.

Manchester.—There are importing firms in Manchester which bring their cotton direct to that point from the

South, the steamers coming through the Manchester Ship Canal. The amount of business done in Manchester is small as compared to the volume of cotton annually handled in Liverpool.

Havre, France.—This is the importing point for France, and, now that the French control Alsace-Lorraine once more, it is thought that much of the cotton consumed by those mills will come through the Havre market. The old French spinning district centered around Turcoing, Lille, and Roubaix, names only too familiar during the years from 1914-1918. During the War, as this district was in the hands of the enemy, new cotton mills were started elsewhere. France took 592,286 bales of American cotton in the year ending July, 1921.

Belgian Markets.—These are Antwerp and Ghent, which were also in the hands of the Germans during the war, so that for the period 1914-1918 the Belgian market was entirely in abeyance. Belgium took 162,980 bales from this country in the year ending July, 1921.

Dutch Market.—This is Rotterdam, and during the war there was talk of starting a future ring in Rotterdam, and attempting to capture the continental business lost by Bremen. Holland took 103,530 bales of American cotton in the year ending July, 1921.

German Markets.—Before the War Bremen was the large German market, and had also obtained a very substantial continental business as well. A great deal of Austrian and Russian cotton was bought through Bremen. A future market had been started in Bremen in 1914, and an arbitration committee similar to the one in Liverpool was in existence. An earnest effort was being made to get European spinners to buy "Bremen arbitration and class," instead of "Liverpool arbitration and class." There is little doubt that just prior to the War this energetic competition from Bremen was cutting into the trade of Liverpool outside Great Britain. Of course, the War stopped all that, and Bremen lost not only all her continental business, but her domestic business as well, since during four years the imports were almost nil. As to what will be the future of the Bremen market it is difficult to tell. The many exchange problems and the industrial confusion incident to the War are as yet unsolved, and it is impossible to foretell in just what channels the business will run. The new states of Czechoslovakia and Poland will have cotton to buy, but whether they will trade again through the German market is questionable. The German is none too popular in Europe since 1914. Another German market has now appeared in Hamburg, which is actively competing with Bremen for the after-war business. Germany is credited with importing 1,281,237 bales in the year ending July, 1921, but some of this went to mills formerly in Austrian territory, and by no means all of this amount of cotton was handled by Bremen firms.

Spain.—Barcelona is the Spanish port, and there are several large importing firms located in the city. In 1920-1921 Spain took 253,659 bales of American cotton.

Genoa, Italy.—Italy has always done a large cotton business and in 1920–1921 took 508,274 bales of American cotton. The port of Italy is Genoa, but, unlike the other European countries, Italy has also an interior market in Milan where are located many importers and spinners' brokers. In 1915 a large amount of American cotton moved through Genoa to the Central Powers, prior to Italy's entry into the war.

Switzerland.—In 1920–1921 Switzerland took 33,695 bales of American cotton. As Switzerland has no sea coast, the cotton comes through various ports, Havre, Genoa, or Bremen. The importing firms are all located at Zurich, and do their business direct with American merchants.

Miscellaneous.—Through Gothenburg, Norway took 4,500 bales and Sweden 51,532 bales in the year ending July, 1921. Some of this cotton is handled by firms in Gothenburg, but most of it is handled through Liverpool houses. Denmark used 6,100 bales of American cotton in the same year. Russia is entirely out of the running at present, but formerly imported a considerable amount of American cotton through the port of Reval. Some of this cotton was handled by Liverpool firms, and some by German houses in Bremen.

Japan.—Outside of Europe, Japan is the largest importer of American cotton, taking 619,000 bales in 1920-1921. There are several very large Japanese firms with offices all through the United States which buy most of this Japanese cotton. One of them has made attempts to do a general export business with Europe and a domestic mill business in this country, as well as their Japanese business. During the War and in 1919 and 1920 these Japanese firms did a very large business and were no small factor in the markets. Besides the Japanese firms proper, a good deal of cotton is sold to houses in Japan by American exporters. Most of the cotton for Japan moves by rail to San Francisco, and thence by steamer. In recent years, however, Japanese steamers have come through the Panama Canal to the Gulf ports.

CHAPTER XVIII

FUTURES

General Remarks.—We have already remarked that the outstanding fact in modern marketing is that merchants deal in time and not in distance. This development, due to the growth of communication throughout the world, has made it necessary that all business be done for forward delivery. The mill does not make goods in September for the fall trade of that year. Those goods were made in the spring. In September the mill is engaged on goods for the spring trade, to be handled by the retail merchants in April or May. The mill needs its raw material in advance, and the merchant must sell it in advance. The cotton trade has worked out an ingenious method for reducing the inevitable risks of forward sales. This method is called "hedging," and as the system appears perfectly simple to the cotton merchant, and almost incomprehensible to the outsider, it will be necessary for us to spend a great deal of time on this phase of marketing American cotton. The merchant, when hedging, buys and sells contracts for the future delivery of cotton on one of the three organized Exchanges, New York, New Orleans, or Liverpool. Therefore, before we go into the matter of hedging, it will be useful to know just what a future delivery contract may be, and exactly how the trading in them is conducted.

History of Futures.—Before the American Civil War the largest proportion of the cotton exported moved from the southern ports in sailing vessels. These ships went

South at the end of the summer, just before the cotton was about to move, sometimes with a cargo of coarse salt, used for fertilizer, and sometimes in ballast. The vessels were fortunate if they obtained a full cargo at once, for usually they were held up for weeks waiting for a full shipload. Meantime, the owners of the cotton first put aboard had to wait patiently, accepting all the risks of the market, until the ship was loaded and could sail for Liverpool. This delay was often very trying, but as the news affecting the price of cotton also moved across the ocean in sailing vessels, it was not so serious as would appear.

Civil War.—The American Civil War entirely disrupted the American cotton trade, since at first the source of the raw material was entirely cut off, and afterwards supplies came only slowly and through very irregular channels. It is interesting to digress and note that the crop of 1859 was 4,860,000 bales, the largest on record to date, and that the surplus weighed heavily upon the market and upon prices, until the four years of war used up all the cotton stored and brought very high prices. The parallel with 1914 is striking, for then again the trade had the largest crop on record, the surplus of which weighed the market down, until entirely consumed through four years of war, to be followed by the highest prices on record.

After the War.—When business was reopened at the close of the Civil War the methods at first were the same. The South was absolutely poverty stricken and the cotton crop had to be sold as fast as picked. The Manchester mills and the Liverpool firms would send their buying orders out to their New York and southern correspondents early in the summer for the opening of the season. A careful forecast of the crop and of the market was made, and freight rates and other factors were considered in giving general limits; but even so, great discretion had to be given the American houses. There soon arose much discussion of the risks attendant upon shipping cotton to Europe in the old manner. The sailing vessels still came to the South, now laden with guano, instead of salt, of which it was said in the late sixties "you could sell a cargo of anything which smelt badly, if you charged forty dollars a ton." The cotton was loaded aboard the vessels which continued to wait for a full cargo.

Selling Afloat.—Meantime, means of communication had improved, for the steamers now stopped at Halifax both ways to land mail and newspapers, and to pick up late American mails. News affecting the price of cotton came across the ocean far faster than did the cotton, so that the risks of those merchants with cotton tied up aboard a sailing vessel, first in the American port and then six or eight weeks crossing the ocean, became unbearable. A scheme was devised to overcome these risks. When the cotton was loaded, duplicate sets of samples were drawn from the bales, carefully sealed up and sent to New York. These samples were then offered on the New York market "to arrive Liverpool," or whatever the destination of the vessel might be. Some cotton went to Havre, but it was almost always Liverpool. The owner would guarantee that the cotton was up to sample, and that he would pay any claim arising in Liverpool. Of course, he had arrangements made to supervise the resampling in Liverpool and to represent him at the arbitration. If the lot was not sold in New York, then as soon as the southern port reported that the vessel had sailed, the samples were again sealed up and sent across to Liverpool by steamer. Thus, while the cotton was at sea, the samples could be offered on the Liverpool market "to arrive" about the time the ship could be expected. The plan worked very well, because the Manchester spinner could now buy the character of cotton he wanted due to arrive about the time he wanted, while the merchant had an opportunity to sell either in New York or in Liverpool, even before his cotton had actually sailed. This scheme was called selling "cotton afloat."

The Transatlantic Cable.—This was soon opened and then this selling "afloat" ceased to be a solution of the problem. For the news now came across the ocean every day, every hour of the day, and when it was unfavorable the owner had much difficulty in selling his cotton "afloat" for any reasonable price. On the other hand, when the news was favorable and it appeared the price would be higher by the time the cotton reached Liverpool, the spinner would find it difficult to find a merchant willing to sell at a moderate advance. Trading in "afloat" contracts was too slow for the rapid means of communication. Moreover, a new complication arose. The Manchester spinner found that as he could communicate more rapidly with the world at large, there now came a demand that he sell his goods for delivery longer ahead, and to do this he needed some protection on the price of his raw material. Another scheme of selling from the United States was devised, shipment in one of two named months. The name of the vessel on which the cotton was to sail was not given, no samples were shown, and no specific grade was named. It was simply stated that the cotton would be October-November shipment, "Basis middling, nothing below low middling." The two months were named both to give ample time to secure freight room, and because of the length of the average sailing voyage across the Atlantic. The general nature of this contract was helpful to both the merchant and the spinner, for it gave a broader and more active market, and allowed each to protect himself through buying or selling the general contract, and then, later, replacing with the specific grade wanted. In other words, we are now coming directly to the modern process of hedging. By some, these contracts were called selling for "shipment."

New York Market.—Similar business was now done in New York, except that, as New York was so much closer to the South, the contract was for a single month. By trading in these contracts the merchant in the South could sell his cotton a fair distance in advance, whenever he thought the price suitable. The trading became quite large, and was carried out by brokers running about from one office to another in search of buyers and sellers. It became customary to trade some distance ahead, the premium on the more distant months taking care of the carrying charges. Finally, the running around the market became such a nuisance, and so many trades were lost by missing the man wanted, that it became customary for the brokers in these forward contracts to congregate in the office of Jas. F. Wenman and Co., on Pearl Street. At last some one suggested that there was a Stock Exchange, and a Gold Board, for the purpose of centralizing and controlling the business in securities and in contracts for gold, so why not start an Exchange for dealing in these cotton contracts? The trading could be carried on at a specified place between specified hours, and the Exchange could also draw up suitable rules and regulations for the trade to follow. Some opposition developed from brokers who feared that if the merchants had a fixed place to meet they might do their own trading, but finally the New York Cotton Exchange was organized and trading began September 7, 1870. Subsequently, the Exchange was incorporated on April 8, 1871, by special act of the Legislature of the State of New York.

The New York Cotton Exchange.—This was the first exchange organized for the purpose of conducting a trade in contracts for the future delivery of cotton, and was followed shortly by the organization of the New Orleans Cotton Exchange, and the adoption of similar rules governing future trading by the Liverpool Cotton Association. The rules of the New York Exchange have stood for fifty years as a model to be followed in broad outline by other commodity exchanges, so that a glance at the first New York Board of Managers is not out of place. The first officers were: President, S. D. Harrison; Vice President, Jas. F. Wenman; Treasurer, A. G. Graves. The Board of Managers were: Wm. P. Wright, Theo. F. Fachiri, W. G. Crenshaw, M. G. Haughton, Geo. Cornwall, Wm. H. Brodie, F. F. Dufais, Henry Hentz, M. B. Fielding, Mayer Lehman, T. J. Slaughter, John H. Inman, J. T. Hanemann, J. H. Hollis, and Chas. A. Easton. Of these men, Jas. F. Wenman was a well-known figure on the Exchange for nearly a half century, and at one time you could see three generations, Jas. F. Wenman, Jas. F. Wenman, Jr., and Byrd W. Wenman, around the ring at the same time. Byrd W. Wenman is still an active member of the Exchange, of which his grandfather was the original Vice President. Mr. Henry Hentz was called for years "the grand old man of the cotton trade." He has now retired, although the firm still bears his name. Mr. Mayer Lehman was one of the founders of the firm of Lehman Brothers, well known as successful bankers, as well as cotton merchants. Mr. John H. Inman was probably the most prominent man in the American cotton trade some thirty years ago.

I must also mention the present Treasurer of the New York Cotton Exchange, Mr. Jas. F. Maury, an old-time merchant, to whom I am indebted for much of this history of the old days in the New York market. Mr. Maury belongs to the cotton trade by descent, for his grandfather was appointed United States Consul at Liverpool by President George Washington in 1790. There is in possession of the Maury family, although not in the possession of Mr. Jas. F. Maury, the following memorandum of cotton imported into Liverpool prior to 1790. The document is in the handwriting of the Consul and reads as follows: "Memorandum: Cotton imported into Liverpool from the

United States of America in the following years, namely: In 1785, 5 bales in 3 vessels; 1786, 6 bales in 2 vessels; 1787, 108 bales in 5 vessels; 1788, 282 bales in 6 vessels."

Definitions.—When cotton was handled in one manner, it was simple to report that so many bales were "sold" each day in the New York market. As soon as there came to be trading in different sorts of contracts it was necessary to specify how the sales were made. It was then said that so many bales were sold "Cotton Afloat," or so many bales had been sold "Cotton to Arrive." Then it came to be said that so many bales were sold of "Cotton on the Spot," that is to say, cotton actually in the port of New York. Then, when the trading in contracts to arrive was taken under the roof of the Exchange, and a regular form of contract and suitable rules and regulations were drawn up, it was said that so many bales of "Cotton for Future Delivery" had been sold. In this manner grew up the modern phrases of "Spot Cotton" or "Spots," and the distinguishing term "Future Contracts," or "Futures." It is necessary that we carefully understand these modern terms which are in daily use in the cotton trade.

Futures.—This word "Futures" is the abbreviation of the original term "Contracts for the Future Delivery of Cotton." The word is never used except in connection with dealings in future contracts upon the three organized exchanges, namely: New York, New Orleans, and Liverpool.

Spot Cotton.—The term "Spot Cotton," or as shortened, "Spots," has undergone a considerable change during the fifty years since 1870. It has taken precedence over all the other descriptive phrases, and no longer means simply cotton actually "on the spot." The old narrow meaning is used in the official bulletins and reports of the various exchanges, but, generally speaking, the term "spots" refers to all transactions in cotton which are not dealings in future contracts. The other old terms remain, and their meaning remains the same, but they are all regarded as ''spot transactions.'' If a man buys cotton ''ex-store'' New York, or if he buys cotton ''to arrive New York,'' or ''cotton afloat,'' or ''FOB cotton,'' you will know exactly what sort of a trade he has made. All these different sorts of transactions are reported daily in the various market reports, but the trade regards them all as ''spot'' deals. The trade has pushed the meaning of ''spots'' even further, and it is here the term becomes especially puzzling to the novice. If a mill makes a contract during the month of September for one hundred bales of cotton of some particular grade and staple, to be delivered during the month of November, that is a spot transaction, even although the contract calls for delivery two months in the future. Such a contract may be, and often is, referred to as a ''Forward Sale,'' but it is a ''spot'' and not a ''future'' transaction. On the other hand, if a merchant having one hundred bales of cotton in warehouse in the port of New York sells during the month of November a contract upon the New York Cotton Exchange for November delivery, and then proceeds at the expiration of the necessary five days to deliver his cotton on that November contract, that is a ''future'' transaction. Once again, there is a phrase to indicate the fact that delivery will immediately be called for by the terms of the sale. The current month on the Exchange is often referred to as a ''spot month.'' However, the actual sale was that of a contract for ''future delivery,'' and the merely incidental fact that it was November and that a November contract was sold makes no difference. The trade regard it as a ''future transaction'' because it involved the purchase or sale of a future contract.

Misleading Definitions.—Every transaction not in contracts for future delivery is a ''spot'' transaction. Every purchase or sale of a contract for the future delivery of cotton is a ''future'' transaction. The terms may be made more specific, as we have seen, but the broad definition remains the same. It is very necessary to bear this fact in mind, because many people become confused by the element of time in the various transactions, and in order to make matters clear in their own minds define "spots" and "futures" in many erroneous and confusing words. I once saw it stated in a general text book on economics that the word spots referred to all transactions in "actual cotton," whereas the word futures referred only to transactions in "contract cotton." Some good people get so confused that they refer to spots as "actual cotton" and futures as "paper cotton." It is easy to understand how the mind, unaccustomed to the logic of the trade, can make such mistakes, for the future contract does appear on the surface as something rather mysterious and aloof from the bales to be actually seen out of the office or study window. The trouble is that by allowing the mind to dwell upon any such notions the greatest confusion of thought may arise. There is no such thing as "paper cotton." The cotton market is all one, and the terms futures and spots merely define different transactions in the same market and the same cotton. Nothing will get the outside investigator so befogged as to attempt to visualize two separate markets, one of spot cotton and one of futures. Nothing will so easily lead the unthinking merchant or speculator to ruin as the conception that, as the two markets are separate, he need pay attention only to the one in which for the moment his interests happen to lie. The cotton market is all one, and the terms spots and futures, as used by the trade, must not be allowed to confuse the mind, or cloud the realization of the fact that cotton remains cotton, whether you sell it to-day to A. B. and Co. across a sample table, or whether you buy a contract for the future delivery of a hundred bales through a broker on the New York, New Orleans, or Liverpool Cotton Exchange.

Anti-Future Legislation.—There is always agitation by the farmer every time the market price of cotton declines to have the future trading stopped because it injures him. There is a similar agitation among the mills every time the price advances on the ground that the future trading advances the cost of their raw material. In 1910 and 1911 there was a serious attempt to pass anti-future legislation in Congress. The bill on one occasion did pass the House, but failed in the Senate. During the next two or three years the agitation took a new form, that of "regulating" future trading instead of prohibiting it. There had been much agitation as to the methods of fixing the differences "on" and "off" middling for delivery on future contracts of cotton of other grades than middling. It is not necessary here to enter into a technical explanation of an intricate matter, which will have to be taken up later. Suffice it to say that during the summer of 1914 a bill called the "United States Cotton Futures Act" passed both houses of Congress and became a law. This measure was introduced into the Senate by Senator Smith of South Carolina, and into the House of Representatives by Mr. Lever of the same State. There had been doubt expressed as to whether the American Exchanges would accept the law, or would move out of the country into Canada. So a provision was inserted to the effect that cable or telegraphic messages to foreign exchanges containing orders for the purchase or sale of contracts not complying with the law would be prohibited. Quite aside from the question of whether the members of the Liverpool Cotton Exchange desired to comply with the law, it was physically impossible for them to obey some of the provisions. The result was that business with Liverpool was impossible. This was a serious matter for the whole trade, but it was a vital blow to the merchants in Texas and Oklahoma who had to trade in Liverpool futures every day in the ordinary course of their business. The law was in force for only a few months and was generally honored by its persistent violation in respect to foreign orders. Meantime, it was discovered that the penalty clause of the bill being a heavy tax on transactions made in contracts not in compliance with the provisions of the bill made the measure a "revenue act." As such it had to originate in the House, whereas in the course of its legislative career it had so happened that it was the Senate bill which had been passed, and the measure, as engrossed for signature, plainly showed this to be a fact. Some merchants in New York took the measure to the Federal Courts, where it was promptly declared to be unconstitutional. In 1916 Congress repassed the bill, omitting the clause about foreign markets, and the law has been in force ever since. An amendment was added in 1919 prohibiting the delivery of cotton below the grade of low middling, and that amendment is included in the outline given below.

United States Cotton Futures Act.—This law provides: first, that it is assumed all bales of cotton traded in on future contracts shall be deemed to weigh 500 pounds; second (Section 5), the basis grade shall be only of the grades for which standards have been provided by the Secretary of Agriculture and that "middling shall be deemed the basis grade incorporated into the contract if no other basis grade be specified either in the contract or the memorandum evidencing the same; third, the cotton delivered shall be "of or within the grades for which standards are established by the Secretary of Agriculture except grades prohibited from being delivered on a contract made under this section"; the differences for grades other than middling shall be the commercial differences "determined as hereinafter provided"; Sect. 5 (Subdiv. 5), "Provided that cotton, because of the presence of extraneous matter of any character, or irregularities, or defects, is reduced in value below that of Low Middling, or if tinged, cotton that is below the grade of Strict Middling, or if yellow stained, cotton that is below the grade of Good Middling, the grades mentioned being the Official Cotton Standards of the United States, or cotton that is less than seven-eighths of an inch in length of staple, or cotton of perished staple, or cotton that is gin cut or reginned, or cotton of immature staple, or cotton that is repacked, or false packed, or mixed packed, or water packed, shall not be delivered on, under, or in settlement of such contract''; fifth, all tenders shall be of the total number of bales mentioned in the contract with such variation as weight may render necessary, and notice in writing or delivery must be given on the fifth business day prior to the day of delivery; sixth, when the cotton is tendered there must accompany each tender a written statement of each and every bale by tag number, showing the grade; seventh, all cotton tendered shall be classed by Government classers in accordance with rules made by the Secretary of Agriculture; eighth (Section 6):

> That for the purpose of section five of this act the differences above or below the contract price which the receiver shall pay for cotton of grades above or below the basis grade in the settlement of a contract of sale for future delivery of cotton shall be determined by the actual commercial differences in value thereof upon the sixth business day prior to the day fixed, in accordance with the sixth subdivision of section five, for the delivery of cotton on the contract, established by the sale of spot cotton in the market where the future transaction involved occurs and is consummated if such market be a bona fide spot market; and in the event there be no bona fide spot market at or in the place in which such future transaction occurs, then, and in that case, the said differences above or below the contract price which the receiver shall pay for cotton above or below the basis grade shall be determined by the average actual commercial differences in value thereof, upon the sixth business day prior to the day fixed, in accordance with the sixth subdivision of section five, for the delivery of cotton on the contract, in the spot markets of not less than five places designated for the purpose from time to time by the

Secretary of Agriculture, as such values were established by the sales of spot cotton, in such designated five or more markets; *Provided,* That for the purpose of this section such values in the said spot markets be based upon the standards for grades of cotton established by the Secretary of Agriculture: *And Provided Further,* that whenever the value of one grade is to be determined from the sale or sales of spot cotton of another grade or grades, such value shall be fixed in accordance with rules and regulations which shall be prescribed for the purpose by the Secretary of Agriculture.

There are other clauses in the law giving the Secretary of Agriculture power to look into books, papers, records, and other memoranda of transactions in cotton, and to examine dealers in cotton, in order to ascertain prices and other information in regard to cotton dealings. There is a clause imposing a tax of two cents a pound on all future contracts not made in accordance with this law, and there are various clauses about regulations. The really vital parts of the law are given in the paragraph above. We shall take up the details of the law at length as we come to them in discussing the various future Exchanges.

CHAPTER XIX

FUTURES: NEW YORK COTTON EXCHANGE

New York Cotton Exchange.—Of the three large future markets, New York, New Orleans, and Liverpool, the New York market is the oldest, and it is also the one in which the largest volume of future transactions is carried on. It seems proper, then, that we should study the New York market in considerable detail, and subsequently in later chapters take up New Orleans and Liverpool in more general outline. We have just completed a survey of the United States Cotton Futures Act, and the outline of the New York and New Orleans future contracts will elucidate clearly the details of the law.

The New York Futures Contract.—The contract for the future delivery of cotton, as dealt in on the New York Cotton Exchange, may be found on page 24 of the book of By-laws and Rules, published by the Exchange, as follows:

New York, ..., 192..

A. B. of the County and State of New York have this day (sold to) (or bought) from C. D., and agree to (deliver to) (or receive) from C. D. of the same place, 50,000 pounds in about 100 square bales of cotton, growth of the United States, at the price of........cents per pound for middling, with additions or deductions for other grades in accordance with the provisions of the United States Cotton Futures Act, Section six, deliverable from licensed warehouses, in the Port of New York, between the first and last days of...........inclusive, the delivery within such time to be at seller's option, in one warehouse, upon notice to the buyer, as provided by the By-laws and Rules of the New York Cotton Exchange. The cotton dealt with herein or delivered hereunder shall be of, or within, the grades for which standards are established by the Secretary of Agriculture, except cotton prohibited from being delivered on a contract by the fifth sub-division of Section 5 of the United States Cotton Futures Act, and shall be of no other grade or grades, and shall be subject to New York Cotton Exchange inspection.

Either party may call for a margin, as the variations of the market for like deliveries may warrant, which margin shall be kept good.

This contract is made in view of, and in all respects subject to the regulations made pursuant to said United States Cotton Futures Act and to the By-laws and Rules of the New York Cotton Exchange not in conflict with said Act or said regulations. Subject to the United States Cotton Futures Act, Section Five.

Basis Middling Contract.—It will be noted that the price per pound agreed upon between the buyer and seller is for middling "with additions or deductions" for other grades. This makes the contract a "basis middling contract." According to the law, as amended in March, 1919, nothing below low middling can be delivered on future contracts.

Fixing Differences.—The Secretary of Agriculture did not designate New York as a "spot" market, and, consequently, the differences "on" and "off" middling for grades other than middling delivered on future contracts in New York must be fixed by the average of the spot markets designated by the Secretary. At the present time there are ten such markets, as follows: Galveston, Dallas, Houston, Little Rock, Memphis, Montgomery, Augusta, Savannah, Norfolk, and New Orleans. These markets all have local Cotton Exchanges which forward by wire to the New York Cotton Exchange, and also to the Bureau of Markets of the Department of Agriculture, every day, the differences prevailing in their market between the various grades. These differences are posted on the floor of the New York Cotton Exchange, together with the averages worked out from them to prevail on deliveries on future contracts and the date on which those average differences will prevail.

Five-Day Notice of Delivery.—A notice in writing of the intention to deliver cotton on a future contract has always been required on the Exchange, but, in the old contract, prior to 1914, a three-day notice was all that was necessary. There was also a provision that on the last business day of the month a "short" notice could be sent out in the morning for deliveries that afternoon. Trading in the current delivery ended at twelve noon on the last full business day of the month. The idea of the rule was to give every facility to those who wished to deliver cotton on contract; and also to prevent the possibility of cotton which could not be delivered arriving in New York during the month. For example, a merchant might have cotton in transit for delivery in October, which through stress of weather at sea, or delayed transportation by rail, did not arrive in the port of New York until the 30th of the month. If he could get that cotton to the warehouse, and have it inspected before sundown on the 31st, he could still deliver on October contracts by issuing a "short" notice on the morning of the 31st. The notion prevailed in the South that it was bad for the price of cotton, that is to say, that it tended to depress the price of cotton to have deliveries made on future contracts, and that the rules of the New York Exchange made it very easy to deliver. The latter part of the idea was entirely correct, the rules were especially designed to facilitate deliveries for the purpose of rendering "corners" as difficult as possible. However, the southern idea was adopted in Washington, and a five-day notice required. The result is a hardship to the southern merchant, who finds it more difficult to deliver against contract than was formerly the case. Delivery on future contracts is a valuable method of reducing one's stock of cotton of a character not immediately desired by the spinner. In fact, one of the functions of the future market is to "carry" such cotton until it is wanted. But the merchant can often sell to better advantage to a spinner than he can deliver, and he is always desirous of waiting till the last moment before actually making a delivery on a future sale. The five-day notice and the doing away with trading in the current delivery five full business days prior to the end of the current month are so many additional handicaps to the southern merchant. We shall discuss the price question later.

Pro Forma Bills.—Another great subject of discussion at the time of the passage of the Cotton Futures Act was the so-called "pro forma" bill. It was customary in the New York market when the classification of the cotton was not complete at the time of delivery to deliver the cotton on a "pro forma" bill. The price of middling was charged and the differences on and off billed later when the Classification Committee had classed the samples. Once again the idea was to facilitate deliveries. In 1910 a series of "corners" ran in all the deliveries from May up to and including August so that the mass of cotton delivered on contract was greater than ever before or since. The warehouses were congested, the Classification Committee was swamped and final bills were very greatly delayed simply by the rush of cotton to be classed. The pro forma bill was an unmitigated nuisance to the receivers of cotton that summer, the more so as weeks would elapse before the completed class and formal bill could be delivered. On the other hand, the merchants who desired to deliver cotton on contract at high prices would not have been able to do so without the pro forma bill rule. Balancing the good and the evil, a good general rule to follow is that anything which facilitates deliveries and tends to prevent corners is a good thing for the trade at large, unless it can be shown the rule is entirely unfair. For example, it would not be equitable to allow sellers to default on their contracts. The rule of the trade should be that, aside from anything as extreme as that, it is better to facilitate deliveries than to be considerate of the receiver.

Government Regulations.—The requirement that the bales should be classified by tag number, instead of by lot number, as in the old days, was a distinct step in advance. It was also thought that this did away with the pro forma bill. In the old form this is true, but the Government classers have found it necessary to adopt a modified form, which they call "Delayed Certification." The rule reads:[1]

> SECTION 4. If on the morning of the delivery day specified in the transferable notice the cotton class certificates covering the cotton involved are not ready for delivery when called for, the tenderer of the cotton shall present to the board of cotton examiners a written notice, stating to the best of his knowledge and belief the true grade of each individual bale to be delivered, properly identifying each bale with its grade. If the foregoing requirements of this regulation shall have been complied with, the chairman of the board shall cause to be written or stamped on such notice a statement validating it for use in the tender only on such delivery day of the cotton covered thereby pending the issuance of cotton class certificates in accordance with these regulations. The tenderer shall on such delivery day deliver such notice to the receiver of the cotton, together with the warehouse receipts and such other papers as may be necessary to the delivery of the cotton on such day.

Transferable Notices.—The law requires five full days' notice of delivery and the rules of the Exchange comply with the law. The notice must be given in writing and the following form is prescribed according to the By-laws and Rules of the New York Cotton Exchange:

TRANSFERABLE NOTICE

(9.59 A. M.)
To: *H. Bros and Co.*

Take notice that on............we shall deliver you 50,000 pounds in about 100 square bales of cotton, in accordance with the terms of our contract sale to you.

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[1] Regulation Number 8, Paragraph 4.

We pledge ourselves to deliver on the day specified for delivery to the last holder hereof, a warehouse receipt or receipts, together with a certificate of grade, or certificates of grade or a validated notice of grade (as provided in section 44 of the By-laws), upon written notice of the holding of this notice, given to us by the last holder thereof before four o'clock P. M. on the next full business day following the day on which this notice is issued.

This notice is to be delivered to us simultaneously with our delivery of the warehouse receipt or receipts to the holder thereof.

(*Signed*) *L. Bros and Co.*

CONDITIONS

Each of the acceptors agrees that the last acceptor hereof will before 4 P. M. on the ...... day of .... give written notice of the holding of this notice to L. Bros and Co., and on the ...... day of .... receive from L. Bros and Co. a warehouse receipt or receipts, together with a certificate or certificates of grade, or a validated notice of grade (as provided in section 44 of the By-laws) for about 100 square bales of cotton and pay them the full amount of —— cents per pound therefor, settling with them on the basis of Middling with allowances for variations for grade in accordance with the quotations established on the sixth business day prior to the date of delivery. It is further agreed that each acceptor shall continue his (or their) liability to each other for the fulfillment of the contract until this notice shall have been returned to (L. Bros and Co.) and a warehouse receipt or receipts for the cotton to be delivered, received by the last acceptor hereof from (L. Bros and Co.) at which time all responsibilities of intermediate parties shall cease.

(*Signed*) *H. Bros and Co.*

FORM OF DEMAND

Time Received	Accepted by	Transferred to
10.07 A. M.	H. Bros. and Co.	G. and Co.
11.15	G. and Co.	H. D. and Co.
11.30	H. D. and Co.	S. M. W. and Co.
11.45	S. M. W. and Co.	H. H. and Co.
12.00	H. H. and Co.	P. P. and Co.

Handling of Notices.—When the cotton is ready for delivery, a notice is issued in the above form and delivered to the party to whom the contract was sold. He must receive the notice prior to the opening of the Exchange. If the party receiving the notice has open on his books contracts he has previously sold in the same delivery month, then he can pass on the notice, or ''transfer'' it in the form shown above. If he receives the notice, and has no open contracts, then he can either ''stop'' the notice and later take up the cotton, or he can sell a contract in the market and pass on the notice to the buyer. He has, in the first instance, until eleven o'clock to make such a sale and transfer. After that hour he must make his sale and transfer his notice within fifteen minutes. If the notice is ''late,'' that is to say, if it is more than fifteen minutes before the next firm receives it, then the notice can be refused, and the cotton must be taken up by the party with whom the notice rested before the time had elapsed. On the last notice day of the current delivery notices can be started as late as eleven if so desired and must be transferred within the fifteen minutes.

First Notice Day.—This is the term used to describe the first day on which notices can be issued for cotton to be delivered on contracts maturing during a certain month, as, for example, ''first notice day for deliveries on October contracts.'' The date of the first notice day is determined by the provision requiring five days' notice of delivery. There is often great confusion on the opening of the market on a first notice day when notices to deliver a large amount of cotton are issued. On one occasion, when my own firm was ''taking up'' a lot of cotton on January contracts, our office ''stopped'' notices on over 28,000 bales of cotton between ten and ten-thirty.

Demands.—The final holder of a notice is required to send a written notification to the firm which issued the notice. This is called a ''demand,'' must be stamped in the office of the Superintendent of the Exchange to show the date and time, and must be presented to the issuer of the notice by 4 P. M. of the next full business day after notice is received. The form is:

FORM OF TRANSFER

To Messrs. L. Bros and Co.

Please take notice that we hold your transferable notice for the delivery of 100 bales cotton on .... and hereby make demand upon you for the same.

(*Signed*) H. BROS AND CO.

Physical Preparation for Delivery.—Meantime the bales themselves are made ready for delivery, that is to say, they are inspected, weighed, sampled, and classed. The weighing is done by a weighmaster duly licensed by the Exchange and the cotton is handled in the presence of an Inspector employed by the Exchange, whose business it is to see that the bales are in good order, are not mixed packed, water packed, false packed, or otherwise unfit for delivery under the law. The cotton is sampled by a licensed sampler under the supervision of the Inspector and in a manner prescribed by the Government regulations. A sample is taken from both sides the bale to show any possible mixed pack. The bales and samples are tagged, and the samples sent to the Government Board of Classers for classification according to the law. The fact that the Government handles the classing has relieved the Exchange of all responsibility and has much facilitated business. The charges vary from time to time, but the charge for certificating cotton has always been higher than in the days when the Exchange did the work.

Actual Delivery of Warehouse Receipts and Bills.—The deliverer must deliver the warehouse receipts before two o'clock on the day specified in the notice and must be paid by certified check in full the amount of the bill. An exception is made when the delivery is on validated certificates of grade. In that case the bill is only approximate and the final bill is presented when the grade certificates are received. The bill and the certificates of grade, or the validated certificate, together must be sent to the receiver by eleven on the morning of the delivery so he can check up and be prepared to pay in the afternoon. The bill must show the marks and weights of the bales. If the cotton is delivered within five days of the weighing no allowance for loss in weight is required, otherwise the allowance is one-half pound per month or fraction thereof. If the cotton is uncompressed it carries a penalty of one-half cent per pound. The receiver is billed for one-half the cost of inspecting and classing the cotton. When the warehouse receipts are presented, duly stamped by the Inspection Bureau of the Exchange, an order for the samples is also attached. The deliverer then gets his certified check and the delivery is complete.

Defaults.—The rule is as follows[2]:

> An intentional default in the delivery of cotton shall be reported to the Supervisory Committee, and shall be ground for expulsion. The default shall be adjusted in the same manner as is provided for an unintentional default.
>
> In the case of an unintentional default, the deliverer shall immediately notify the receiver of his inability to make delivery of all or any portion named in the contract, and the bases of settlement for defaults in delivery of cotton due on such contract shall be the price of the current month (or if trading in that month has ceased, in the next succeeding month) established as soon as practicable after the default is made known, plus a penalty of one half a cent a pound, and also any additional loss that may prove to have been incurred not covered by the foregoing penalty. Where a default has been made known after business hours, the settlement shall be made on the quotations established on the opening of the following business day.
>
> Where a receiver has failed to receive and pay for any delivery properly tendered, he shall be responsible to the deliverer for any loss incurred.

I do not recall any intentional default, but there have been cases of accidental default. On one occasion, on the last delivery day, a lighter sank at the wharf, and cotton being trucked ashore for inspection in ample time to be handled was thrown into the water. It was impossible to get the bales reconditioned in time, and, as it happened, impossible to secure, at that particular warehouse, sufficient bales to entirely replace the damaged cotton, so that an unintentional default resulted. On another occasion, a comparatively new firm forgot the last day of trading and failed to make delivery on some five hundred bales. A penalty of $2.50 per bale assisted them to a better understanding of the rules.

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[2] New York Cotton Exchange Rule 7.

Delivering on Contract.—It is sometimes thought that the delivering of cotton upon future contracts is either of interest to members of the Exchange alone, or else is a rather pernicious practice, because it is sometimes alleged that the fear of deliveries tends to depress the price. As a matter of fact, one of the important functions of a future market is to receive cotton on contract, and the easier it is made to deliver on future contracts the better the Exchange is able to fulfill one of its important functions in marketing the cotton crop. The necessity of buying a great deal of cotton in order to select out even-running cotton for his spinner customers often leaves the merchant with a stock of cotton for which he has no immediate use and yet which he has been compelled to purchase. Some one must carry that cotton until such time as the spinner has use for it. If that cotton can be delivered on future contracts, the merchant has his capital released for further purchases. In this manner he is enabled to do a larger business, and, of course, the more he can buy at any reasonable price the better for the farmer. Moreover, when a merchant cannot find an outlet at once for his surplus cotton he will refrain from buying the grades not immediately in demand. This leaves the farmer to carry the load. It is one of the functions of merchants engaged in business on the organized future exchanges to take up this sort of cotton on future contract deliveries and to carry it until the spinner needs it. Of recent years the cotton not in demand has been of the lower grades, and a part of the foolish agitation against low-grade cotton was devoted to preventing its delivery on future contracts, an attempt partially successful. It is certainly better to have the merchants carrying such cotton than to have the farmer selling it in despair at far below the cost of production, and far below the actual value to the spinner, as was the case in 1919 and 1920. Of recent years it is the low grades thus carried by the future markets, but any one in the trade can recall that deliveries of high-grade cotton on October New York contracts in 1905 were regarded as a bad thing for the South owing to the same mistaken notion about prices.

Amounts Delivered.—The amount delivered on future contracts always varies with the seasons. Under normal conditions a large crop, and especially a large crop at a time of industrial depression, or a large crop of cotton undesirable at the moment, means a large turnover of spot cotton on future contract deliveries. On the other hand, the absolutely largest deliveries ever made on contract were in 1910, a year of very small crops and attempted corners. With a surplus of cotton the amount delivered on future contracts should be large, so that the Exchanges will perform their share of carrying the load. Deliveries in the past ten years on future contracts in New York have been as follows: 1909-1910, 1,005,300 bales; 1910-1911, 658,200 bales; 1911-1912, 499,300 bales; 1912-1913, 380,100 bales; 1913-1914, 414,500 bales; 1914-1915, 169,600 bales; 1915-1916, 154,800 bales; 1916-1917, 137,400 bales; 1917-1918, 105,200 bales; 1918-1919, 127,500 bales; 1919-1920, 85,400 bales; 1920-1921, 267,700 bales; 1921-1922, 536,600 bales.

It will be noted that the deliveries fell off sharply in the war years. This was due in part to the small crops and in part to the transportation difficulties which made it troublesome to get cotton to New York.

CHAPTER XX

TRADING ON THE NEW YORK COTTON EXCHANGE

Fluctuations.—The future contract calls for the delivery of "about 100 bales," or about 50,000 pounds of cotton. The receiver is not required to accept a tender with a variation of more than 1 per cent from this weight. For the purpose of actual trading in future contracts, it is assumed that the delivery will always be 100 bales, weighing 50,000 pounds. The actual readjustment on deliveries varying from this weight is made at the time of delivery. In figuring the value of a future contract, the weight is always 50,000 pounds. The fluctuations are in 1 1/100 (.01) of a cent per pound. If you will point off hundredths from the weight of the contract, you will have 500. In other words, each fluctuation amounts to five hundred cents on a contract of 100 bales, 50,000 pounds. Of course, 500 cents are $5, so it results that each fluctuation is $5 on a contract of 100 bales, which is the unit of trading.

Points.—Each fluctuation of 1 1/100 cent is called a "point," and the market is said to move in points. If you see December New York quoted at 17.85, it means that the price of December contracts for future delivery in New York is seventeen and eighty-five one-hundredths cents per pound. Perhaps it would seem more simple if we put it thus: Seventeen cents and eighty-five one hundredths of a cent per pound. If the market is advancing, the next price should be 17.86, then 17.87, 17.88 and so on. If the market is declining, the next price should be 17.84, then 17.83, then 17.82 and so on. If the market is moving rapidly, it may "jump" these separate points, as for example, when December sells at 17.85, and the next sale is at 17.88.

Dollars per Bale.—It is obvious that, as one point amounts to $5 per contract twenty points will amount to $100 per contract, which is exactly a dollar a bale. The trade have a way of saying the market is up or down so many dollars a bale, so it is as well to realize what they mean. As twenty points is a dollar a bale, so forty points are two dollars a bale, sixty points are three dollars a bale, eighty points are four dollars a bale, and one hundred points, a full cent a pound, are five dollars a bale. Thus, a change in value of a cent a pound amounts to $500 on a contract of 100 bales. The fractions of a cent are also sometimes used by the trade who will talk of an advance or decline of a quarter of a cent per pound. A quarter of 100 points is 25 points, or $125 on a 100 bale contract, a half cent is 50 points or $250, and three quarters of a cent are 75 points, or $375 per contract.

Long and Short.—A merchant who has bought cotton future contracts and has not yet resold them, or who has bought spot cotton and has not yet resold it, is said to be "long" of the market. On the other hand, a merchant who has sold future contracts and has not yet repurchased them, or who has sold spot cotton forward and has not yet bought it, is said to be "short" of the market. The cotton merchants, when they sell spot cotton ahead to a mill or to another merchant, usually "cover" themselves by the purchase of contracts for future delivery. Such a transaction leaves the merchant long the futures and short the spots. Similarly, when a merchant buys spot cotton which he cannot immediately resell, he covers himself by the sale of contracts for future delivery "against" the spots. In that case he is long the spots and short the futures. In both these cases the merchant is "even" on the market. This sort of transaction is "hedging," about which we shall have much to say in later chapters.

Maximum and Minimum Fluctuations.—On February 1, 1917 there appeared the announcement from the German Government that their submarines would sink without notice allied or neutral ships in the North Atlantic. A great deal of cotton was held in the South in anticipation of higher prices on an expected "peace note." This cotton was at once for sale, the holders attempting to resell in a body at the opening of the New York market. The result was the worst decline the cotton market ever saw, prices breaking five cents a pound or $25 per bale on that memorable opening call. The losses were enormous and there was much talk as to what should be done to prevent such a collapse in the future. After the United States entered the War, the Washington authorities were very much afraid that some such panic might again occur, and they requested the exchange to adopt a rule covering fluctuations. The result is Rule 26 as follows:

> Trades for the future delivery in any one month shall, during any one day, not be made at prices varying more than two cents per pound above or below the closing bid price of such month on the preceding business session of the Exchange. Nor shall trades in any month be made in any one day at an advance of more than two cents a pound above the lowest previous price of such month on that day, or at a decline of more than two cents a pound below the highest previous price of any such month on that day. . . . The provisions of this rule shall not apply to trading in the current month on and after the fifteenth day thereof.

In theory the rule is intended to stop trading until buyers appear and thereby prevent any such collapse. It has worked well in minor emergencies but there is doubt as to how it will work in the case of any such panic as occurred February 1, 1917. The danger is that when you stop trade at a decline of two cents a pound, you will leave a lot of unsold cotton still hanging over the market. Every one knows that the cotton is there, and that knowledge may deter buyers who would otherwise be attracted by the decline in price. The next day you reopen the market and there is an immediate decline of another two cents a pound and you still have unliquidated cotton. There is then, at high prices, a distinct element of danger in this rule.

Trading in Eleven Months.—The first paragraph of Rule 3 reads "No contracts shall be made nor recorded for any month excepting the current month or the eleven succeeding months" in other words if this is the month of September you can trade in contracts for delivery up to and including the following August and not beyond.

Trading Ring.—The actual trading is done around a "ring" or raised platform, with three steps up and three steps down again into the center of the circle. At the bottom of the inside steps is a stout, wooden rail fastened to brass posts, so that the brokers will keep the center clear. The whole arrangement is like the grain "pit," except that it is not so small and that the grain pits have no railing at the bottom of the steps. At one side of the ring is a wooden pulpit, known as the "rostrum" and from which the superintendent conducts the calls and makes announcements. On the other side of the ring and raised above it is a small gallery with a blackboard on which clerks write the quotations of the transactions made in the ring below. At the right of this board is a smaller one for Liverpool quotations and to the left another board for New Orleans. There are smaller boards for the previous day's "closing prices," for maximum and minimum trading limits, for the high and low of the current day, and a plain board for announcements. Alongside the rostrum are indicators which can be moved by pressing a button. These indicators have all twelve months printed on a circular drum so that any one month can be brought into view. Their normal position is to show the current month. Just above the rostrum is a large brass gong which is rung for the opening and closing, and also for special announcements.

Opening Call.—The market is opened by a "call" of all the months in which there is trading. The superintendent appears on the rostrum just before ten, New York time, and at ten rings the gong, and announces "Proceed with the Call, September" (or whatever is the current month). Then all wishing to buy or sell September make their bid or offers which are repeated by the superintendent, acting as chairman, the whole affair being very like the usual auction. The chairman will continue as follows "September, 18.25 bid, offered at 30, sold at 30, 35 bid, offered at 40, any more September?" then "October, 18.55 bid, offered at 60, 57 bid, offered at 60, sold at 60, 62 bid, offered at 64, sold at 64, any more October? November, 70 bid, offered at 80." Between each month the chairman raps with the hammer, and turns the indicator to the month in which the trading is being done. After the list has all been called, the chairman moves the indicator back to show the current month, raps with his hammer and announces "Call adjourned, Market open." Trading is then carried on around the ring in all months simultaneously. There are two other calls, one at 11:45 and another at 2:45, known as the second and third calls, respectively. The chairman conducts these in the same manner as he does the opening call and while they are going on, trading in the open market is suspended. The second and third calls are omitted on Saturdays.

Open Market.—In a busy market, or, as the brokers call it, a "fast" market, confusion seems very great, but as a matter of fact there is little real disorder. Trading is done by word of mouth or, as the rule says, "by open outcry." There is also a set of very simple signals. In the cotton market a man buys by beckoning with his hand toward himself, as though he were pulling something toward him, while he sells by the reverse gesture, that is, pushing his hands away from himself. He indicates the number of contracts by holding up the correct number of fingers. Thus both hands held up with all ten fingers outstretched are the signal for ten contracts or a thousand bales. On orders of over a thousand the broker usually flashes his hands the requisite number of times, at the same moment announcing the quantity thus: "One thousand, two thousand, three thousand, all I have," or whatever the quantity may be.[1]

Rules of Trading; Floor Committee.—The Floor Committee is charged with the duty of enforcing rules of trading which are printed at length in the by-laws and rules of the Exchange. Any member making a bid or an offer shall take any part that is sold him or bought from him. He cannot refuse to trade in a part of a whole lot. For example, a broker bidding "55 for a thousand October," must accept the sale of a single hundred bales. No "all or none" bids and offers are allowed.

Disputes as to the priority of any bid or offer are settled by the Floor Committee, usually by leaving it to a viva voce vote of all the members around the ring at the moment. In case of a simultaneous acceptance of a whole bid or offer, or a part of a bid or offer, the whole has precedence. The Floor Committee is also charged with preventing frivolous or misleading bids and offers, and with the preservation of order around the trading ring. The latter is more or less of a joke, as, in an inactive market, any amount of horse play is condoned, the Committee never interfering, unless business be interrupted. The Committee must also see that no "puts" or "calls" are done, since these are prohibited by the by-laws. All bids and offers are for contracts of one hundred bales at least, since that is the minimum of trading, and all bids and offers must be in one one-hundredths of a cent, or more, as lesser fractions are not recognized.

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[1] The use of the hands in trading in the grain pits varies very much from the above signals. Do not attempt to follow grain trading with cotton signals.

Comparisons; Disputed Trades.—It is the duty of the seller to see that the buyer knows the transaction has been made. The seller must "compare" with the member to whom he sold his cotton in order that there may be no misunderstanding. There is nothing to prevent the buyer from comparing, and as a matter of fact, the careful broker, whether a buyer or seller, will be certain there is no misunderstanding as to the trade. In the event of a dispute arising between two members as to the purchase or sale of a contract, the member claiming the purchase or sale, shall, unless there is a mutual understanding to the contrary, buy in or sell out the contract in dispute, and the loss resulting shall be settled by arbitration. As a matter of fact, disputes are less frequent than might be supposed, and are usually settled by an equal division of the profit or loss. It is rarely other than a loss, because, while the market can go only two ways, it can almost always contrive to go the wrong way in case of error.

Records.—The rules require that "Every member of the Exchange shall keep, for a period of not less than six years, the original and complete written record of all transactions in cotton made by him in the New York market showing the dates of such transactions, the names of the parties thereto, the quantities bought or sold, and the price thereof."

Orders to Account.—The taking of customers' "orders to account" is strictly prohibited by the rule, which reads: "A member in executing an order is prohibited from becoming a principal to such transaction, and he shall neither buy from nor sell to himself. Any member violating this rule may be suspended or expelled from membership by the Board of Managers, under section 81 of the by-laws."

This brings us to the consideration of what are called "bucket shops." The origin of the term is variously described, but the meaning is only too plain. A bucket shop is an office which is ostensibly a broker's office, but which does not actually execute any of the orders received, merely betting with the customer on the price of cotton. Such offices are not connected with any Exchange and are thoroughly unreliable, usually closing up in haste if the customers are on the right side of the market.

Unwritten Rules of Trading.—There are trade customs, or unwritten rules, which are rigorously enforced in the trading ring, simply by the force of the public opinion of the members themselves. It is not necessary for us to go into them, as they are all technical, but the underlying basis of them all is to make the trading as fair as possible. A single illustration will suffice. A member may announce the total amount which he wishes to buy or sell. He is under no obligation to do so, but it may appear to him that, in the existing state of the market, he is more likely to get his cotton if he does make such an announcement. So he will bid for cotton, or offer cotton, announcing the exact amount in which he wishes to trade as for example: "I give 55 for 5,000 October, all I want," or "I sell 5,000 October at 55, all I have." The unwritten rule is that this statement must be the exact and literal truth. He is not permitted to vary a single hundred bales from that announcement. The ring has methods which will convince any trader it is best not to violate one of these trading customs.

Closing.—When the hour of three, or twelve on Saturdays, approaches, the Chairman takes his place in the rostrum and at 2:55 or 11:55, the gong is rung as a preliminary signal. At one minute before the hour the gong is rung continuously until sharp three or twelve o'clock, when the Chairman raps for order with his gavel, and announces "The market is closed." Of course, in an active market, it is difficult to break trading off short, but the rules provide that no trades made after the gavel falls may be quoted, and the bidding and offering comes quickly to an end.

Trading After Hours.—Trading after hours is prohibited by the rules, for the reason that unofficial transactions were made at prices varying from the official "closing bid and asked," and these irregular quotations were wired South and to Europe and often caused needless alarm. This trading, irregular, and unlawful under the rules of the Exchange, is called "trading on the curb," and is punishable by a fine. It is necessary to mention the matter because some people, not familiar with the phrase, suppose it refers to some sort of trading in cotton out on the open street.

Reporting Transactions.—It is a very important matter that all transactions in future contracts should be immediately reported. There are several uniformed reporters stationed at different points around the ring, whose duty it is to report all trades. As soon as they see a sale made, these men write the month and the price on a slip which is sent to an operator seated at a desk next the rostrum. He stamps the time on the slip, telephones the month and price to the clerks in front of the blackboard, and also puts the quotation on the wire which goes to the office of the Western Union Telegraph Company, and its subsidiary, the Gold and Stock Telegraph Company, which latter concern operates all the quotation machines or "tickers." The same wire runs also to New Orleans and to other Southern cities, while a similar wire carries the New Orleans quotations instantaneously to the New York Exchange. These quotation wires are "blind" wires, that is to say, only the operator in New York or New Orleans can send over them, although any point on the wire can receive the quotations.

In this way, the wires are kept clear all the time for the quotations coming from either market, and delay is minimized. When we take up the matter of arbitraging between the markets, the importance of instantaneous quotations will be understood. The telegraph companies call the service from this wire "continuous quotation service." They have also a less expensive service, which quotes the markets every fifteen minutes. This is called "C. N. D." quotation service, after the "Commercial News Department" of the telegraph company, which handles the matter. There is a telegraphic code for all twelve months as follows:

> *F* stands for January; *G* stands for February; *H* stands for March; *J* stands for April; *K* stands for May; *M* stands for June; *N* stands for July; *Q* stands for August; *U* stands for September; *V* stands for October; *X* stands for November; *Z* stands for December.

These symbols are now used on the tickers. The long string of paper coming out of the machine, and on which the quotations are printed, is called the "tape." Formerly the tape would read thus "NY 10.12 May 62..63..62.. NY 10.13 May 61..60..58..59..NOls 9.11 May 46..48 ..50..NOls 9.13 May 48..46..45..43" and so on. Since the symbols were adopted the same "string" of quotations will read thus "NY 10.12 K..62..63..62..NY 10.13..K 61..60..58..59..NOls 9.11..K 46..48..50..NOls 9.13.. K 48..46..45..43."

Committee on Futures.—The rule of the Exchange in reference to quotations reads as follows:

> The time and price at which every transaction is made shall be reported by the seller within ten minutes of its consummation, and if not reported by either party shall not be recorded in the record of transactions. Transactions made in any month above the price at which such month is offered, or below the price that is bid for such month, until what is offered shall be taken, or what is bid for shall be supplied, shall not be deemed made at the market price for such month and shall not be reported or recorded in the record of transactions. No transaction that is

not made by open outcry shall be reported or recorded in the record of transactions. The names of the purchaser and seller shall be given when required.

In order to see that this rule is obeyed, the Board of Managers appoints each month a Committee of five members known in the rules as the "Committee on Futures" and in the parlance of the trade, "the Quotation Committee." This Committee has full charge of the reporting of all trades and settles all disputes. It also makes up the official "bid and asked" quotations at the close of the market, and settles the "tone" which shall be given. Thus, after the long string of bid and asked quotations, you will see the final notation "Market closed barely steady," or "weak" or "strong" or "steady" or "very steady." Those are the most frequent words used, but the Committee is not restricted to these formal words. You will see such phrases as "Market closed excited and irregular" or "Market dull." The Committee has also the duty of seeing that the highest and lowest prices traded in for each month during the day, are correctly quoted. This is called the "high and low," sometimes abbreviated into "hi&lo." Disputes as to quotations are settled on the spot by the Committee on Futures. These disputes are usually that a quotation has appeared on the board in contravention of the rule quoted above. In case of such dispute, the Committee decides whether or not the quotation shall stand. After the trades are posted on the blackboard and put on the wire, the quotations are entered in a book which has a complete record with the time of every transaction in futures during each day. A summary is published of the record in the daily bulletin published by the Exchange.

Notations on Tape.—When the Committee decides that a quotation should be cancelled, the following notice appears on the tape "NY 10.20 Cancel NY 10.13 K 55." In case of a mistake of the operator, the notation will read

"NY 10.20 Cancel NY 10.13 K 85 error should read NY 10.13 K 55." Every day at three o'clock with the quotation of the last sales made goes the symbol "gn on sls NY," which means "good night on sales New York." The appearance of this signal on the tape is an indication that the quotation of the last sale has been printed. The same notice will follow for New Orleans, and then, in order as obtained, the tape will print "NY official Hi and lo. . . , NY Close, New Orls hi and lo and New Orls close." After the last figures, and the last statistics have been printed for the day, the tape prints the notice "Good Night Tuesday September 26, 1922," or whatever the date may be. Sometimes on special occasions, the operator will add a touch of sentiment, as "Good Night Thursday December 24 1922 —and a very Merry Xmas." The tape begins each day with a similar "Good Morning" and the date.

Broker's Memorandum and Contract Slips.—As an aid to memory and a record of the trades he has made, every broker always keeps memoranda of all trades made, showing the price, amount, month, and name to whom sold or from whom bought. These memoranda are usually in the form of a stiff card with proper rulings for the various notes as above. These cards are printed in black ink on one side for purchases and in red ink on the other for sales. These cards are taken by clerks and the trades "written up" during the day on an abbreviated form of contract given below. Beginning at two o'clock and continuing after the close, and until all trades made have been compared and signed, clerks holding power of attorney "to sign memoranda slips and contracts" are present on the floor of the Exchange. Every firm is required to have at least one clerk on hand for this purpose. You will note that the purchase slip given below reads "sold to," while the sales slip reads "bought from." Each clerk signs the other firm's slip, that is to say if Jones and Co. sell Smith and Co. one hundred bales of December, Jones' clerk will sign Smith's purchase slip which is headed "sold to Smith and Co." The reverse is also the case, Smith's clerk signing Jones' slip which is headed "bought from Jones and Co." The purchase slip is printed in black and the sales slip in red.

Purchase Slip

New York................19....

SOLD TO

L. Bros. and Co. of New York, N. Y.

and agree to deliver to them, subject to the By-Laws and Rules of the New York Cotton Exchange, and the United States Cotton Futures Act, Section 5.

Bales Cotton	Delivery	At Cents Per Pound For Middling

Sale Slip

New York................19....

BOUGHT OF

L. Bros. and Co. of New York, N. Y.

and agree to receive from them, subject to the By-Laws and Rules of the New York Cotton Exchange, and subject to the United Cotton Futures Act, Section 5.

Bales Cotton	Delivery	At Cents Per Pound For Middling

CHAPTER XXI

TRADING ON THE NEW YORK COTTON EXCHANGE
(continued)

Active and Inactive Deliveries.—For some reason, not now clear, there is not the same volume of business transacted in all twelve months in which contracts for future delivery are handled. It is possible that the peculiarities of the movement of cotton in the days of sailing vessels had something to do with the custom of trading in certain months to the exclusion of others. Whatever the reason, the twelve deliveries can be divided into three classes. The months which are always active are: January, March, May, July, October and December. The months which are usually inactive but sometimes active are : August and September. Those deliveries which are never active are: February, April, June and November. If an order to buy a January contract comes to the ring, the January can be bought immediately and within a point or so of the last quotation. It may be impossible to execute an order to buy February, unless the broker pays a substantial premium above the rest of the market. It is almost inevitable that the February order will fail to find any one with an order in hand for February, with the result that the only person from whom a February can be bought is a "floor trader" operating on his own account. He will sell the February, but only at such price as will make it possible for him to buy some other month, say March against the sale and subsequently sell out his March and buy in the February at a profit. He takes very good care that the price he charges for his services in providing a February contract shall be such that he will make a profit. It is therefore foolish to trade in the inactive deliveries.

Orders and Market Orders.—The common form of an order is what is called "a market order" or, as it is called sometimes, "an order at the market." The phrase is self-explanatory, and means just what it says, namely, that the order is to be executed immediately at the prevailing price. Such an order would read as follows: "Buy 100 January." When the broker receives such an order at the ring, he either takes an offer of January at what he considers the market price, or if he does not hear an offer, calls out "January, what is doing in January?" or else he simply bids "I give 54 for January." When he gets the cotton, he reports "Bought one January at 54."

Limited Orders.—When the broker has specific instructions as to the price, or the time, or some other instruction, he is said to have a "limited order." For example, an order reading, "Buy two January 18.50" means that the broker is to purchase two contracts for delivery in January, but at a price not above 18.50. He is "limited" to that figure. Some orders are limited as to time as for example, "Buy one January on the opening." That order can be executed only on the opening call and at no other time. If it arrives after the opening, then it is the duty of the broker to so inform his client and ask for instructions. Similar orders are frequently given to buy or sell "on the close," or at some specific hour of the day. It is quite frequent to receive orders to buy or sell at "eleven o'clock," because, on account of the difference in time, that is the hour in New York at which the market in Liverpool closes. Such orders are to be executed at the same time that Liverpool closes, because they are connected in some manner with business in the English market.

Stop-Loss Orders.—These orders are intended to prevent the market running away from a trader, and are usually for the purpose of "stopping the loss." Such an order will read "Buy one May 19 cents Stop," or "Sell one May 18.50 Stop." Such an order means that the broker is to buy or sell either at the price named, or if that be impossible, at the best possible price as soon as the market reaches the figure named. The market must reach the level of the stop price before the order is operative. It is sometimes said that the May, for example, must sell at 18.50 before the broker can execute such an order. While the strict interpretation of the stop order may be as above, it is not practical in the market to have the broker so restricted. In case the month be not active at the moment, there might never be a sale or an offer at the price named, in which case, if the broker did not proceed to make a market for the cotton, the whole point of the customer in giving a stop loss order would be lost. It is often impossible to execute stop orders exactly at the price named. This is particularly true of the even figures, .25, .50, .75 and the even cents, at which figures a good many orders always accumulate. When the broker is unable to buy or sell exactly at the price named, the stop is said to be "jumped." On every day when the market is excited and fluctuations are wide, there is complaint and trouble about "jumped stops." For this reason while stop orders are a protection, they are not the absolute protection they are thought to be by the unwary. In times of great excitement, as for example the famous morning of February 1, 1917, they are a menace to the market and a positive death trap to those who have relied upon them for protection.

Switching Orders.—These are sometimes called "swapping" orders and they may be either limited, stop, or at the market as the case may be. For example, "Buy 1,000 January and sell 1,000 March, January 30 under March," is a limited order since January must not be less than 30 points under March when the order is executed. "Buy 1,000 January and sell 1,000 March" is a market order. "Buy 1,000 January and sell 1,000 March, January 25 over March Stop," is a stop loss order and is to be executed as soon as the "trading difference" makes January 25 points over March, at the best prices a broker can obtain after that time. These switching orders are difficult to execute, because it is not easy to simultaneously buy one month and sell another at exactly the prices needed to make a specified difference.

Conditional Orders.—An order which is limited by some condition rather than by price is called a "conditional order." Thus, "Buy one May if the strike is settled," is an order based upon the condition that the strike shall be settled. Such orders are frequently based upon Government reports, as for example: "Buy one May if the Government estimates the crop at under ten million." These orders are intensely disliked by the average broker for the reason that it is almost impossible to give a satisfactory execution. The order is not in force until a certain piece of news is known, and that information will cause the market to move quickly in the same direction as the order, with the result that the customer always complains that too high a price has been paid, or that the cotton has been sold at too low a figure. The market will usually sell off again after such a violent rise, so that the customer would do better to await the result of the news rather than to attempt to anticipate a movement which will not begin until his order is operative.

Discretionary Orders.—An order which is not exactly limited, but which is to be executed in case the broker believes a certain fact, or holds a certain opinion is called a "discretionary order," as for example "If you think well buy one January." Many brokers positively refuse such orders on the ground the customer should do his own thinking. The feeling is sound, always supposing the customer is at a point where he can obtain quick information. Otherwise he has some justice on his side when he wishes assistance from his broker. Liverpool has a habit of sending orders to be "executed at your discretion but during the day."

Exchange Membership.—The New York Cotton Exchange has 450 memberships held by men scattered all over this country and all over the world. Prior to 1914, there had been no distinctions between citizens of this country and alien members. In that year, after the War broke out, the Liverpool market experienced a great deal of difficulty with firms having contracts outstanding whose only partner resident in Liverpool was an alien and subject to internment. The realization of the fact that a similar situation might easily arise in New York led the Exchange to modify the by-laws as of November 1, 1915. All members elected after that date were compelled to make a statement to the Membership Committee as to their citizenship. If aliens, they cannot make a contract on the Exchange, they cannot sign a contract made on the Exchange, and they cannot permit their firm to sign a contract, unless there is a member of that firm, either a citizen of the United States or an alien member of the Exchange elected prior to November 1, 1915. With the exception of these restrictions and of the further restriction that an alien member cannot vote or hold office on the Exchange unless elected prior to November 1, 1915, there is no distinction made between members. All, whether aliens or citizens are entitled to privileges of the floor and to have their business carried at "members' rates," which are half those charged to non-members.

Election to Membership.—The membership of the Exchange comprises men engaged in every branch of the cotton trade and in every part of the world. There are spinners' brokers in New England, manufacturers in different parts of this country, merchants in the South, in the North, in Europe, both Great Britain and the Continent, and also in Japan. The requirements for membership outside the matter of citizenship, are simply the applicant should be twenty-one, should be of good character and financial standing, and should have such knowledge of the cotton business as the committee and the Board of Managers deem necessary. Every application for membership must be indorsed by at least one member of the Exchange and must be posted on the Bulletin Board in the Exchange room for ten days before it is acted upon by the committee on membership. That committee consists of a chairman, who must be a member of the Board of Managers, and four other members. They examine the applicant and his indorsers, and require the applicant to make an affidavit to the truth of his statements. If their report to the Board is in favor of the application, a majority vote of the Board elects the applicant. If the report of the committee is adverse, then a two-thirds vote is required to elect the applicant.

Seats.—This word, as used to mean the right of membership in an exchange, is supposed to have originated in the fact that the members of the original board of stockbrokers in New York sat in chairs at their sessions. Whatever the origin may be, the word is regularly used now in the sense described, as for example "Jones has a seat on the New York Cotton Exchange." There are only 450 members and in order to be elected an applicant must procure a transfer to himself within 30 days of a membership. There is then a market value for memberships in the Exchange, which value changes very much from time to time. At this writing (1922) a membership in the New York Cotton Exchange is worth about $18,000. Should a member fail to meet his obligations to his fellow members, his seat is sold after due process as prescribed in the by-laws and the amount realized by the sale is used to pay his Exchange creditors, any surplus amount remaining being turned over to his receiver for the benefit of the general creditors.

Members in New York.—There are about 150 or perhaps 175 members of the Exchange who are daily present on the floor and attend to actual dealing in future contracts. These members are divided into various classes. First we have the merchants with their representatives and partners on the floor, who attend solely to their own business and execute no orders for outsiders. Then we have a much more numerous class of firms known as ''commission merchants'' who attend to orders in futures for customers in this country and in Europe. These commission houses may be merchants also and do business for themselves as well as for clients but their principal business is the execution of orders for clients on commission. Then there are the ''clearance houses,'' also commission men, whose principal business is done for members of the Exchange present on the floor in New York. These members trade in and out of the market for their own account, and, not caring to run an office themselves, give the trades to the clearance house to handle for them at a moderate rate of commission. These firms ''clear the contracts,'' that is to say, they sign on them, both bought and sold, and render a statement to the member the next day, debit or credit, including a moderate rate of commission which is provided for this service in the by-laws.

Actual Brokers Around Ring.—Around the ring, actually executing the orders, are the members of the various firms who execute their own orders and those of their customers; ''floor brokers'' who handle orders for other members, either for their own account, or for the account of their customers; and ''floor traders,'' who trade in and out of the market for their own account. We need say little of the firm members executing their own orders, for it is obvious that the firm will sign on the transactions made, which ends the matter. It is necessary to say a word as to the other two classes trading around the ring, for their functions are not quite so plain.

Floor Brokers.—It frequently happens that the partner of a firm, who is a member of the Exchange, and entitled to trade around the ring, finds that he can occupy himself to better advantage in other details of the business. After all, ring work is very confining, and the man who is watching orders in an active market for five hours, can hardly give much attention to other and important details of his business. Many firms, therefore, employ "floor brokers" to watch their orders, and attend to their execution. The floor broker is held strictly to account for the orders entrusted to him, and, if the market "gets away from him," he is responsible to his client for the cotton he should have bought or sold. They "give up" the name of the firm for whom they have bought or sold, and after they have done so, are no longer held responsible for the contract risk. Until they do notify the member with whom they have traded, that their principal is so and so, and the buyer or seller has accepted the name, the floor broker is personally responsible for the contract. Thus, if A buys from B 100 January at 18.50, and has made the trade for the account of C and Co. and on their order, he must immediately notify B, that he "gives up" C and Co. Then, if B accepts the name, and later in the day C and Co. fail, the floor broker A is not responsible for the purchase of the cotton. As a matter of common practice, A is usually too busy to manage his "give ups" until either late in the day, or after the close. In that case, if he has not told B that he bought the cotton for C and Co. and they fail, B will hold A for the trade, and A will have to stand any loss.

These floor brokers work hard in active markets, their risks are considerable, and the brokerage charge is not excessive. On the other hand, they do not have to obtain outside business, they have no "customer risk," and they have no office expenses or office details with which to worry.

Floor Traders.—These men trade in and out of the market for their own account. They are sometimes called "scalpers," although the term so used is a little misleading. A floor trader may be a scalper, in practice he usually is, but he does not necessarily scalp the market. A scalper is a man who buys cotton at one price, with the expectation of almost immediately reselling at a higher price, or who sells cotton with the expectation of almost immediately covering at a lower price. In other words, he hopes to make money out of the small, immediate fluctuations of the market. He closely resembles the street buyer of the smaller southern town. Each will trade in the market at any moment, and each is valuable as a stop-gap, when no actual orders are available. Like his southern contemporary, the scalper is usually much abused by those who benefit from his operations. Since the scalper must either resell or rebuy at a profit in order to live, he will never trade at the offered price or at the bid price. That is to say, the scalper will not buy January at 50, when it is offered at that figure, nor will he sell January at 50, when that price is bid. He will buy at .48, or sell at .52, because by so doing he hopes "to turn around" at once at a small profit. When the scalper cannot see his way clearly, or more particularly when the market has been fluctuating very violently and rapidly, then he will withdraw entirely. It is then that his absence makes his value apparent. It cannot be expected that orders to buy and sell will always synchronize, and when the scalper is either afraid to trade or is so far alarmed that he wishes an extraordinary margin on which to trade, it may be most difficult to either buy or sell. The market will be offered down sharply on a moderate order to sell, or bid up with equal violence on a moderate order to buy, before the order can be executed. The ring had a most expressive phrase to describe that character of market, only too frequent during the war years. They would say that the market had ''struck an air pocket.'' The scalper is a valuable part of the market machinery and he earns his pay by always making a market for either the buyer or the seller.

Most floor traders are also scalpers, and their operations will vary with the man and the market. In a very broad, active market, some scalpers will still trade in a hundred, or at most several hundred bales, while the larger operators will scalp in and out with as many thousands. There are floor traders, who do comparatively little scalping, but who trade in the market for a position, that is to say, they estimate the probable course of prices for a fair length of time, and either buy or sell according to that judgment. Floor traders may also act as floor brokers, and many of them do so. There are others who refuse to execute any orders on the ground that watching orders distracts their attention from their own affairs, and also that, because they must execute the orders first, they lose opportunities to trade.

Exchange Management *Officers.*—The exchange is governed by a President, Vice President, Treasurer, and a Board of fifteen ''Managers,'' all of whom are elected annually. The Secretary is a paid official, who is also Superintendent of the Exchange, managing the office, having supervision over the statistics, and acting as Chairman at the calls.

Committees.—There are fourteen standing committees, all of whom have a member of the Board of Managers as Chairman, with the exception of the Classification Committee, which is a salaried body, with the inspector in chief at its head. The amendment to the United States Cotton Futures Act of March 4, 1919, gave the Department of Agriculture the duty of classing cotton for delivery on future contracts, since when the Classification Committee has existed merely in name and for the classing of cotton outside future deliveries. It was a very good thing to place the classing of cotton in the hands of the Government since the Exchange was relieved of all criticism, and since the official character of the class has made it more satisfactory to all concerned. The other committees are as follows: Executive, Finance, Supervisory, By-laws and Rules, Membership, Information and Statistics, Warehouse and Delivery, Adjudication, Arbitration, Board of Appeals, Commissions, Complaint, Futures, and Spot Quotations.

Committees General.—The Executive Committee has charge of all the affairs of the building in which the Exchange is located, of the office, and other executive matters, and also has jurisdiction over the quotations which are sold the telegraph companies under a contract, with strict provisions as to their distribution. The Finance Committee has charge of the finances and accounts. The By-laws and Rules Committee must draw up in proper shape and pass upon all proposed changes in the By-laws and Rules before such changes are submitted first to the Board, and then, in the case of By-laws, to the membership of the Exchange. We have already considered the Membership Committee. The Commissions Committee has charge of the "commission law," passes upon all questions in relation to an interpretation of that law, has supervision over all branch offices of members, all private wire and telephone connections, passes upon the eligibility of all "solicitors" of business, and generally supervises all matters pertaining to the development of outside business by members of the Exchange. The Committee on Futures we have already considered, and the Committee on Spot Quotations makes up the quotations for spot cotton in the New York market, which is daily quoted.

Arbitration.—There is a regular system of deciding disputes between members of the Exchange. First, there is the Arbitration Committee. In case a dispute cannot be settled informally, either by an agreed upon compromise, or by some informal arbitration, each side selects an official arbitrator, and these two select a third who must be a member of the Arbitration Committee. A formal hearing, or hearings, are held, the decision of the arbitrators is rendered, from which decision there is an appeal to the Board of Appeals whose decision shall be final.

Adjudication Committee.—It is provided by sections 5-7 of the Charter granted the New York Cotton Exchange by the State of New York; that:

> It shall be the duty of said Adjudication Committee to hear and decide any controversy, which may arise between the members of said Association, or any person claiming by, through, or under them, and as may be voluntarily submitted to said Committee for arbitration; and such members and persons may, by an instrument in writing signed by them, and attested by a subscribing witness, agree to submit to the decision of such Committee any such controversy which might be the subject of an action of law or in equity, except claims or title to real estate or to any interest therein, and a judgment of the Supreme Court shall be rendered upon the award made pursuant to such submission.

This unique provision enables a committee of the Exchange to act as an actual court of law, and the Adjudication Committee has so acted, and has had its decisions upheld in the Courts. No member of the Adjudication Committee can be a member of the Board of Managers.

Warehouse and Delivery Committee.—This Committee has charge of all the detail concerning the delivery of cotton on future contract and the storage of such cotton within the port of New York. It issues licenses to the warehouses, to the weighers, samplers and inspectors, the latter being salaried employees of the Inspection Bureau, a department of the Exchange under the direction of the inspector in chief. This is an important committee and in times of large deliveries, its duties may be arduous.

Discipline.—The discipline of the members of the Exchange is in the hands of two committees and of the Board of Managers. The Complaint Committee consists of three members, none of whom may be members of the Board of Managers. It is the duty of this committee to investigate and make written complaint of misconduct on the part of any member. The Board of Managers and the Supervisory Committee may themselves initiate charges against a member, but as they are also judges, it is perhaps better to have the complaint originate with an independent committee. It is also provided that a non-member of the Exchange, who believes he has a grievance against a member, may complain in writing to the Complaint Committee. They will investigate, and, if they consider the complaint well founded, will bring formal charges against the member in question.

Supervisory Committee.—This Committee consists of three members, all of whom must be members of the Board of Managers. The Committee has various important duties, the first of which is the trial of all members against whom charges of misconduct have been brought. There are elaborate provisions as to the method of bringing the charges, of receiving a written reply to the complaint, and of holding the trial, or hearings. All members of the Exchange must attend and give evidence if summoned by the Supervisory Committee, and a refusal to do so will make the recalcitrant member himself subject to discipline. No legal counsel is permitted a member before the Supervisory

Committee, nor can the prosecutor, whether a member, or the Complaint Committee, be represented by counsel. After the hearings, the Supervisory Committee reports to the Board of Managers, and if the findings are approved, the Board then proceeds to impose a penalty.

Failed Members.—The Supervisory Committee has also supervision over the case of members who fail to meet their obligations. In accordance with certain provisions of the By-laws, they can even announce themselves the suspension of a member who fails to meet the obligations which the Committee has decided he owes to another member. If a member is thus "failed by the Committee," he cannot be reinstated to membership in the Exchange. This provision is so drastic, that offhand I recall only one instance of an involuntary suspension, and that occurred while I was Acting Chairman of the Supervisory Committee. In case the member announces his own failure, it is the duty of the Supervisory Committee to investigate the causes of the failure and to report to the Board, whether in their judgment the failure was caused by reckless and unbusinesslike conduct. No failed member can be reinstated until he has appeared before the Supervisory Committee, and has satisfied them that his conduct prior to the failure was proper, that he has done his uttermost to settle with his creditors, and that his reinstatement is for the best interests of the market. The Supervisory Committee may recommend his reinstatement to the Board of Managers, but a two thirds vote of the Board is necessary to reinstate him. I do not now recall a case where the Board reinstated a member against the Committee's recommendation, although I do recall one case when the Board refused to reinstate, even though the Committee had so recommended.

Procedure in Case of Failure.—The By-laws provide that when a member of the Exchange cannot meet his obligations he shall notify the Superintendent in writing. The

Superintendent notes upon the letter the date and time, and then mounting the rostrum, rings the gong, and hammers with his gavel for order, and reads the announcement which is then posted upon the bulletin board. All members having outstanding contracts with the failed firm must liquidate those contracts "within three business hours" of the time of failure. If the failure be announced at, or after, twelve o'clock on a week day, the time carries over into the next business day. The same is true of a Saturday. The three hours are figured from the time of the announcement, irrespective of the close of trading for that particular day. The greatest confusion used to be caused by the announcement of a large failure. I recall the announcement of the failure of Pell and Co. on July 31, 1914. The reading of the letter was followed by a death-like silence, with the ring deserted, while the brokers hurried to the telephones to ascertain exactly what contracts their respective firms had open with the failed house. In short order, they came back into the ring, and pandemonium broke loose, as each tried to sell out the cotton left on their hands by the failure. The clearing house, to be mentioned in the next chapter, has done away, it is to be hoped, with this sort of dramatic incident, the expense of which was always in great disproportion to the pleasure afforded by all sensational events.

Accounts Against Failed Members.—After the contracts have been reinstated in the market, the loss incurred by the members having such contracts is computed by them, and the bills sent to the Supervisory Committee. These bills may be for large amounts since the commission house is responsible to its customers for the validity of contracts made on their behalf. If, for example, a customer had sold through a commission house a thousand bales of December at 12 cents, the firm in question having sold the contracts to Pell and Co., the customer neither knows nor cares whether his sale was made to the failed firm. It may have been impossible for the firm to have resold those contracts except at 10 cents, or a loss of ten dollars a bale, $10,000 on the thousand bales. That loss, whatever it may be, must be accepted by the commission firm. This so-called "contract risk" may be very considerable, and the bills against the failed firm may amount to large sums. In the case of Pell and Co. the claims were over a million and a quarter dollars. The Supervisory Committee passes upon all such claims, and according to their decision, it divides the proceeds of the memberships held by the failed firm when such memberships are sold at auction. There is an appeal from the decision of the Supervisory Committee on such matters to the Arbitration Committee, both on behalf of the members claiming and on behalf of the failed member.

Nominating Committee.—This Committee is appointed every spring by the Board of Managers to name candidates for the officers and Managers the ensuing year. No member of the Board may be a member of this Committee. The nominations are voted upon at the annual election in June. If the members are not satisfied with the nominations thus made, it is possible for them to put up an "opposition ticket," either for all positions, or for such positions as they see fit.

Committee on Information and Statistics.—The duties of this committee are well indicated by its title. The work of the committee, however, is as a rule purely supervisory in character, as the statistics are all made up in the office of the Exchange under the direction of the Secretary.

Exchange Statistics and Information.—This brings us to the question of the information upon which the trade rely. This is of two sorts, that furnished by the Exchanges, and that furnished by the Government. We shall first treat of the Exchange information. The New York Cotton Exchange each day publishes an official *Daily Circular,* in which is given in condensed form all the statistical information posted every day upon the numerous blackboards on the floor, such as the port receipts, the weekly and monthly movement, the spinners' takings etc. All these figures are published annually in that admirable statistical booklet known as *Shepperson's Cotton Facts.* In addition to this information, the circular carries a daily statement of the New York stock "certificated" for delivery, showing the exact number of bales in each grade, as well as a statement of the differences to be applied to deliveries upon the next delivery day, and a list of the "notice days" for the current month. Each Friday's circular contains the "weekly insight" and "spinners' takings" as compiled by the Exchange. Each circular also contains a complete list of all transactions in futures on the opening and the second and third call, the close of the day, the high and low, and the transactions between each call. The time is not given on these transactions, but otherwise the record is an exact transcription of the "book of record."

Government Reports.—The Exchange obtains from the Government weather bureau all sorts of climatic information which is carefully tabulated and posted. In the first place there is a large glass weather map which is painted up each morning by men from the weather bureau. This map shows in different colors the rainfall and snow at each station in the country during the twenty-four hours ending at 8 A. M. Washington time. It also shows the barometric pressure, the temperature at 8 A. M. and the weather, clear, rain, snow, partly cloudy, or cloudy. Arrows show the direction of the wind and any frost is also noted. The lines of barometric pressure, isobars, and the lines of temperature, isotherms, are also shown on the map so that areas of high and low pressure can be ascertained. Later on in the day are posted the predictions which the Weather Bureau issues by states for the coming twenty-four hours. Later there come detailed reports showing the rainfall and the maximum and minimum temperatures in the past twenty-four hours at many stations in the belt. These reports are posted by the Exchange on printed slips by states and counties with the figures of production for the past two crops, so that the importance of rainfall or temperatures at any given point may be visualized. Once a week during the crop-growing season there appears a summary of the weather and crop conditions from the weather bureau. This report, called the "weekly weather report," is read from the rostrum of the Exchange.

Government Condition Reports.—Once a month the crop-estimating bureau of the Department of Agriculture issues a report on the condition of the cotton crop, in percentages as compared to a theoretical condition of one hundred per cent. The figures are made up to the twenty-fifth of the month and are issued in the first three days of the following month, as for example: The June condition report issued about June 3 shows the condition of the crop as of May 25. The last of these condition reports shows the condition of the crop as of September 25 and is issued about October 3. The July report contains the estimate of the year's acreage and a correction of the estimated acreage of the preceding year. This correction is almost invariably a plus correction. A few years ago, Congress passed a law requiring the Department to estimate the crop, or rather to estimate the probable yield with the condition given in the report, according to a formula devised by the bureau. Every condition report, therefore, beginning with the July report, contains an estimate of the yield. The bureau is careful to state that all these estimates are subject to subsequent weather conditions. The system nevertheless, has not been satisfactory to any one. The South complains that the bureau either does not correctly estimate the crop, or that when its figures are low, the market pays no attention to it. The fact is, it is impossible to issue accurate estimates of a crop in bales until after frost. Before Congress instructed the bureau to include these estimates with the condition figures, the reports exercised a very considerable influence on prices. No one could assert that the percentage of condition was absolutely inaccurate because there was no way of proving it, moreover, the government condition figures always proved an accurate indication of the probable out-turn of the season, whether the crop turned out to be large, average, or small. Now that we have definite figures in bales the mathematics of the bureau can be absolutely disproved. For example, in 1921 the bureau made a series of underestimates of the crop. Allowance should be made for the late fall, and for the fact that the bureau stated definitely such weather might increase the yield, nevertheless the result has been to discredit the condition report, and it would be well if the crop estimates in bales could be omitted, and the condition only given. There is a final estimate given by the bureau in December on the basis of 500 pound bales, linters excluded. This report at one time exercised much influence on the market, but in late years the trade has been so surfeited with crop estimates by December that the final crop estimate has fallen rather flat.

Census Bureau Ginning Report.—The census bureau publishes, approximately every two weeks from September to March, a report showing the amount of cotton ginned during the fortnight and for the season to date. These "census bureau ginning reports" are of great importance as the trade accepts them as a true indication of the yield. The final report in March is taken as a settlement of the growth of cotton that year. We have seen that the growth may differ widely from the so-called commercial crop.

Census Bureau Consumption Report.—These reports are issued once a month and show the takings of the mills, amount of cotton in spinners' warehouses, amount of cotton in public warehouses, both North and South, and the exports. These figures are given for the month and for the season to date. These reports are becoming as important a factor on the demand side of the problem as the ginning reports are on the supply side.

Publication of Government Reports.—The condition reports, the census bureau ginning and consumption reports are all issued in Washington on a specified day and at a specified hour, both day and hour being announced in advance. The census reports are usually issued at the opening of the market, ten o'clock, and the condition reports at either eleven or twelve o'clock Washington time, but there is no hard or fast rule on the matter. The telegraph companies "clear" a wire into the department in Washington, and this wire is run into the New York and New Orleans exchanges as well as into most of the important southern exchanges. The reports usually come in two telegrams, the first being the "flash," which contains simply the important figures boiled down as much as possible, and the second a long message giving all the details by states, together with comparisons from the last report and from the preceding season. The operator sits at the end of the open wire near the rostrum and as soon as the flash comes over the wire, the figures are written upon the blackboard thus, "Condition 72.3 Indicated crop 10675," or "Ginned to Oct. 15 2345." The detailed message is later posted upon the bulletin board on the floor of the Exchange. Sometimes the Department adds a summary of factors considered important during the month, as for example some statement about the weevil damage. These additional statements are always confusing and are not at all liked by the trade. There have been times when the market moved very violently on these Government reports, and when it was almost impossible to execute orders in the confusion. "Bureau days," as such report days are called, are cordially detested by most of the trade, but Government reports do give valuable information on both supply and demand, and if they are to be issued at all, this seems to be the only method. There have been in the past serious scandals in regard to "leaks" or advance information of Government figures which must be carefully guarded and given out all over the cotton belt at the same instant.

Spot Business.—The New York Cotton Exchange has also a number of rules and regulations covering dealings in spot cotton in the New York market, whether cotton "ex store," "f. o. b." or "to arrive." It is not necessary to go into these rules which do not vary greatly from those in force in other markets. There is one provision that all disputes shall be subject to arbitration under the rules of the Exchange, and that where the cotton is sampled in the port of New York, such samples to be used later as a basis of arbitration, the samples must be drawn under the supervision of the Inspection Bureau of the Exchange.

The spot business done in New York is still considerable, although the movement back to the interior has reduced the volume as compared to 1870. The sales "on the spot" in New York in the past ten years have been as follows: 1921-1922, 60,842 bales; 1920-1921, 37,000 bales; 1919-1920, 59,000 bales; 1918–1919, 102,000 bales; 1917–1918, 200,000 bales; 1916–1917, 275,000 bales; 1915–1916, 404,000 bales; 1914–1915, 168,000 bales; 1913–1914, 162,000 bales. The figures in no case include the cotton delivered in future contracts, a list of the deliveries being given elsewhere. They also do not include cotton destined for New York, "sold in transit," and diverted either to a mill or to some other market. The amount of cotton handled by New York firms outside the limits of the port of New York is very large, since there are some of the largest American firms located in New York. The volume of sales in the port of New York would be larger were the warehouse facilities greater than they are at present. The Exchange has made several efforts to improve the warehouse situation but without success. The initial cost of the land has been the stumbling block. A concrete proposition was being investigated by a committee of the Exchange in 1914, but was blocked by the intervening panic.

CHAPTER XXII

NEW YORK COTTON EXCHANGE CLEARING ASSOCIATION

Clearing Associations.—The banks of the country have long had "clearing houses" by means of which they have made a daily interchange of checks, and also paid a single debit balance, or received a single credit balance from the clearing association without the necessity of a separate settlement with each individual bank. The system early spread to the securities markets, so that a firm both buying and selling a security during the day's business, as for example Union Pacific, had only to deliver or receive through the clearing house the net Union Pacific bought or sold, as the case might be. There is also a system for bringing the monetary value of all purchases and sales to a certain fixed figure through the clearing house. Later, the commodities markets began to think of a clearing house for themselves. It was a nuisance to run around the market every day collecting and delivering checks for balances between different firms.

Original Cotton Exchange Clearing Association.—The old system of settling contracts between members was briefly as follows. Where A and Co. had bought an October contract from C and Co. and later in the day, or the following day, or some other day, A and Co., in the course of their day's trading happened to sell an October contract to C and Co., a "direct" settlement was made. Thus, if A and Co. had bought on the tenth of August an October contract from C and Co. at 18.50; and on the twelfth of August it so happened that A and Co. sold to C and Co. an

October contract at 18.75 it necessarily followed that C and Co. owed A the difference between 18.50 and 18.75, or 25 points or $125. In the old days A would send around a bill to A on the 13th of August and receive from them a check for the $125. Another method of clearing contracts off the books was rather more involved. A would buy an October from C, but when he came to sell the contract out, it would so happen that A did not sell to C but to B and Co. Of course, this left A long the one October he had bought at 18.50 from C, and short the one October he had sold at 18.75 to B. A's customer has made $125 less the commission and war tax and he is entitled to his money at once. On the other hand, A and Co. have bought from one house and sold to another, so they cannot get a direct settlement and must carry the contracts open on both sides until delivery day when they can pass to B the notice they receive from C. Such an arrangement meant a long string of open contracts on both sides of the account and considerable money tied up in cash settlements with customers where the money had not been collected from the "street." So another plan of settling contracts was devised known as a "ring settlement." Suppose that Jones has lent five dollars to Smith, who has lent five dollars to Brown, who has lent five dollars to Jones. It is obvious that if all three could be brought together at the same time, the debts could all be cancelled at once. That is the idea of a ring settlement. A sells B an October, B sells C an October, and C has already sold A an October. If they are all brought together, and the trades reduced to an arbitrary price, then each can pay the other the difference between the "ring" price and the original trading price, and all the trades are wiped off the books. The price for "rings" was the 10.30 A. M. price as published by the Exchange and printed on the tape every day. The firm which made the ring notified all parties to it, who acknowledged the notification and the settlements were made. There was a "ring room" to which representatives of all firms came every day to compare their lists of open contracts and make such settlements as they could. Trades were always settled "earliest date and highest price."[1] Once the contracts were settled, then the clerks of the various firms ran around delivering and collecting checks. This became an intolerable nuisance so the Cotton Exchange made an agreement with the Corn Exchange Bank to run a clearing house for the money involved in all settlements. Each firm now put all items due it and all items it owed on a "sheet" and paid only the net to the clearing house, or received from them a draft for the net due. All sheets were checked up by the clearing house and at the proper time, if a balance was found the drafts accepted by the bank could be collected.

Origin of New Style Clearing House.—By this method only the monetary differences were cleared, the system having nothing at all to do with the actual contracts. Some of the grain markets were known to have clearing houses for contracts as well as differences, and there had long been talk that some such system would be a good thing in the cotton market. The clearing of contracts reduced a firm's position at once to a "net long or short," the advantage of which it is easy to understand. For example, in January, 1910, our office was "net short" for our customers on the street, and yet because most of the contracts were sold to three or four firms who had long been "bulling" the market, we could not ring, and were compelled to carry both long and short contracts open on our books. On our purchases we were called for money to bring them down to the market, which sums were deposited in trust companies and banks, while, on the other hand, when we asked that the firms who sold us bring their contracts down to the market price, they in turn deposited the cash in the banks. The result was a severe financial strain until at last the long interest sold out in a day of running declines and we were able to settle up our street position. In addition to the nuisance of having money tied up unnecessarily in this manner, the "contract risk" was very considerable, for if one of the firms to whom we sold should fail, we would be responsible to the customer for the contracts he had ordered sold. In replacing these contracts by fresh sales in a market upset by failure, the loss might be large. Precisely this has happened in several large cotton failures, the most notable of which was the Sully failure in 1903 and the Pell failure on the outbreak of the European war in 1914. It was felt that a conservative member of the Exchange was completely at the mercy of some reckless house, trading in utter disregard of conditions or of their own financial ability. The Pell failure cost over a million and a quarter, and the agitation for a different method of settling contracts became widespread. While the Exchange was closed in 1914 a committee worked over the details, the plan was perfected and the "New York Cotton Exchange Clearing Association" was incorporated in the spring of 1915. The Association actually began to operate the same summer.

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[1] *See* Chapter on New Orleans.

Membership.—The members of the Association are stockholders, and any member of the New York Cotton Exchange can become a stockholder. He is required to do the following, in order to have his contracts cleared through the Association: (1) he must sign and deposit with the directors an agreement to clear all contracts through the Association, to abide by all by-laws and rules of the Association, and to make such by-laws and rules a part of all contracts he may make with the Association, or a member thereof, or a firm, having a partner a member thereof; (2)

he must advance to the Association the sum of $15,000 as a part of the Guaranty Fund; (3) he must deposit with the Association his share of stock, duly indorsed in blank for transfer, as a security for the performance of his duties towards the Association.

Contracts with Association.—It is provided that when a member turns his contracts into the Association to be cleared, as he does in the manner later described, the Association succeeds to and is vested with all the rights and privileges of the contract, and assumes towards the buyer the position of seller, and towards the seller the position of buyer.

Definition of Margins.—We have spoken earlier in the chapter of the term ''margin,'' and it is necessary the same should be defined. In the parlance of the cotton trade a ''margin'' is the amount of money deposited by a client with a firm, or by a firm with another firm, or with a Trust Company, or with the clearing house to secure the one with whom the deposit is made against the fluctuations of the market. Prior to the clearing house, when trades were settled in the old way, margins between firms, except by special arrangement, were deposited in one of a number of banks or trust companies, named by the Board of Managers as ''margin depositories.'' These banks then issued a ''margin certificate'' bearing interest at a specified rate, which certificate read ''Pay to the order of A and Co., or B and Co., as the Superintendent of the New York Cotton Exchange may direct.'' When the contracts were settled, and the money due to B and Co. had been paid, A would send around the certificate to B who would ''release'' it by signing his firm name upon the back. The Superintendent would then countersign the certificate, and A and Co. could deposit it in his own bank, like any ordinary check, and thus get his money back plus accrued interest. In case of a failure on the part of A, so that he could not pay B the amount due, B and Co. would present the certificate to the Superintendent of the New York Cotton Exchange who would indorse it over to B and Co., and they could apply the proceeds against the money owed them on the contracts by A. For example, if A and Co. sell B. and Co. an October contract at 15 cents, and the market advances to 16 cents, A and Co. owe B. and Co. one cent a pound, or $500. B thereupon calls A for margin, the $500 is deposited in a Bank or Trust Company, and B and Co. are so notified.

Original Margins.—An original margin is a deposit made at the time the contract is made as a protection against any fluctuation in the market, and without waiting to see whether there are adverse fluctuations or not. On purely speculative business, the custom is to require original margins from the customer, and to require that those margins "be kept good." In the old days it was provided in the by-laws of the Exchange that original margin up to five dollars a bale might be called by either party to the transaction, and the amount had to be deposited within twenty-four hours. The present clearing house requires margin on every single contract net long or short as shown on the day's "sheet," in the manner described below. The amount of the margin varies with the judgment of the Directors as to market conditions. When the market was gyrating wildly at very high prices in the late years of the World War, the original margin requirement was ten dollars a bale. That meant that if a firm had a net interest on its sheet of ten thousand bales, that firm had to deposit $100,000 original margin with the clearing house. The actual money is deposited with banks or trust companies, as in the old days, and when the clearing house no longer requires the margin, the certificates are indorsed off by the manager and by the superintendent of the Exchange. A smaller original margin is required on "straddles." For example, a firm may be long 5,000 May, long 15,000 July, and short 5,000 October and 5,000 December. Here the net interest is only 10,000 bales, on which original margin may be required, but there is also a "straddle" open of some 10,000 bales, and on that straddle position additional original margin is required to protect the clearing house against any change in the relation between the months.

Original Margin Requirements.—The directors can establish rules as to the amount of original margin required, provided they give 24 hours' notice. The minimum original margin on a net interest is $3 per bale, and the maximum is $25 per bale. The minimum on a straddle is 50 cents per bale and the maximum is $15 per bale. An original margin of $25 per bale may be required on any interest in the current month. The directors may also call an additional original margin on an interest in a month which has a premium on the closing bid prices, equal to the extent of the premium over the lowest succeeding month. No clearing member may at any time have an interest, either net or straddle, of over 400,000 bales. Liberty Bonds are accepted as original margin.

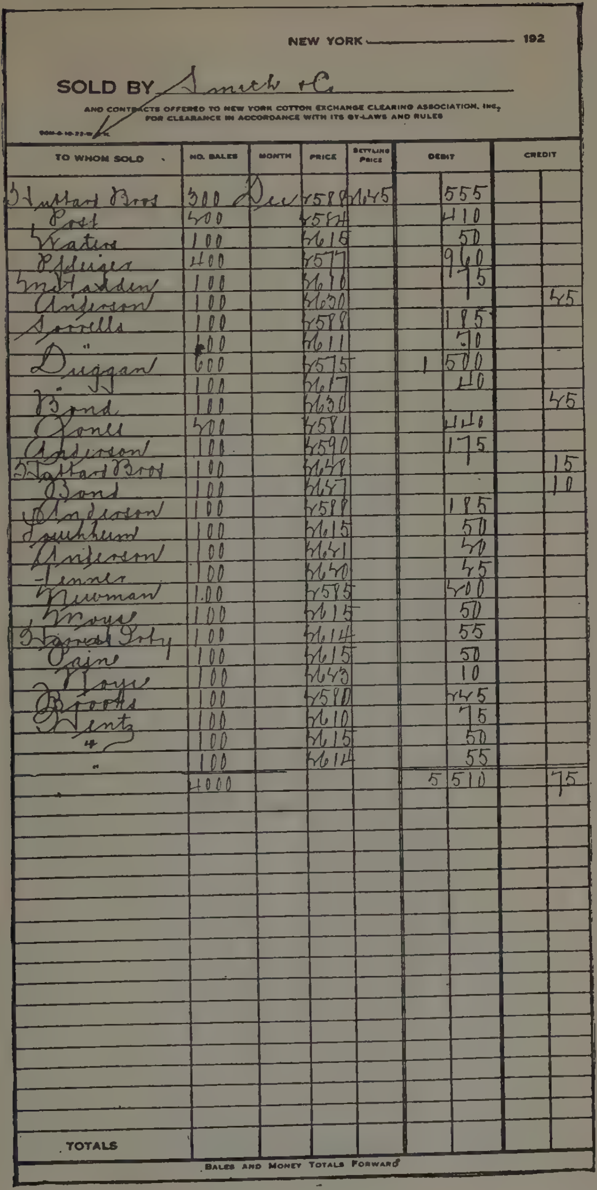
Variation Margins.—In addition to the original margins, the clearing house can require "variation" margin in case of sharp fluctuations during the day. Suppose A and Co. have a net interest the day before of 10,000 bales on which they have deposited $100,000. The market is declining, and directly it is off 40 points or $2 per bale. Then, at the market price, A and Co. have really only $8 per bale margin, or $80,000. The clearing house can require A to deliver them a certified check within an hour of the time they are "called" to bring his ten thousand bales to the market. A and Co., having received the call, must deposit the $2 per bale, or a certified check for $20,000. The amount so deposited can be deducted from any debit balance due on that night's sheet, or can be added to any credit draft. In case A and Co. had a credit balance on their preceding day's sheet, and that balance is equal to the amount called, or more than the amount called, they can, if it is not yet time to collect the draft, notify the clearing house simply to deduct the variation margin from the face of the draft due.

Fees for Clearing.—A firm is charged ten cents for every item, that is to say, for each contract given to the association for clearance. After salaries, rent, and other expenses are paid, the balance is passed to the "surplus fund."

Notices of Delivery.—There are very careful rules about the issuance of notices of delivery which members may wish to send out against contracts in the current month. It is not necessary to go carefully into those rules, which are merely the technical methods of arranging matters so that notices may be issued in accordance with the By-laws and Rules of the Exchange, and with the law, and yet be handled through the association.

Failures.—We have seen that the By-laws and Rules of the Exchange require that contracts with a failed member must be closed out within three business hours of the announcement of the failure. The same rule applies to the clearing association which will send a broker into the ring, to sell out or buy in all contracts the failed member may have had open with the association. The loss, if any, will be repaid the association as follows: (1) by the original margin; (2) by use of such portion of the surplus fund, as the directors may deem proper; (3) by taking the balance, if any, from the Guaranty Fund. The amounts taken from the Guaranty Fund are to be replaced by assessments levied upon all clearing members in the proportion that the number of contracts cleared for each member during the preceding nine months, bears to the total number of contracts cleared for all members in the same time. This arrangement is the fairest that can be devised, and it will practically remove all risk of loss in the case of small failures. Some doubt as to the result in case of a very large failure must remain until we have seen the system tried out. On the one hand, the original margin is a protection of no small moment and may so reduce the total amount to be assessed upon members that the outcome will be very satisfactory. On the other hand, there is the danger that, as the failed member is known to have had a large interest, and it is also known some broker must either buy or sell that cotton, the clearing house broker may have considerable difficulty in closing the trades. That is a risk that can hardly be eliminated.

The Actual Working.—We have already seen that clerks, holding power of attorney from the various firms, compare and sign the contracts made on the Exchange. These signatures are essential, as they make a binding contract which is assigned to the clearing association by both the buyer and seller. No contracts which have not been properly signed will be accepted by the association for clearance. After the slips are signed they are sent into the office of each firm and there entered in the firm's books, to be checked back against the orders on which they were made. The actual bookkeeping, so far as the firms themselves are concerned, need not detain us. But the contracts are also entered upon long sheets to be sent in to the Clearing Association. Purchases are entered upon sheets printed in blue ink, and sales upon sheets printed in red ink. All contracts bought and sold on that day are entered upon the sheets together with the names from whom bought or to whom sold, the prices at which the trade was made, and debits or credits to bring them to the ''settlement price'' which is the bid price at the close of that day's business on the Exchange. Each month is entered upon a different sheet. One of these sheets looks like this:



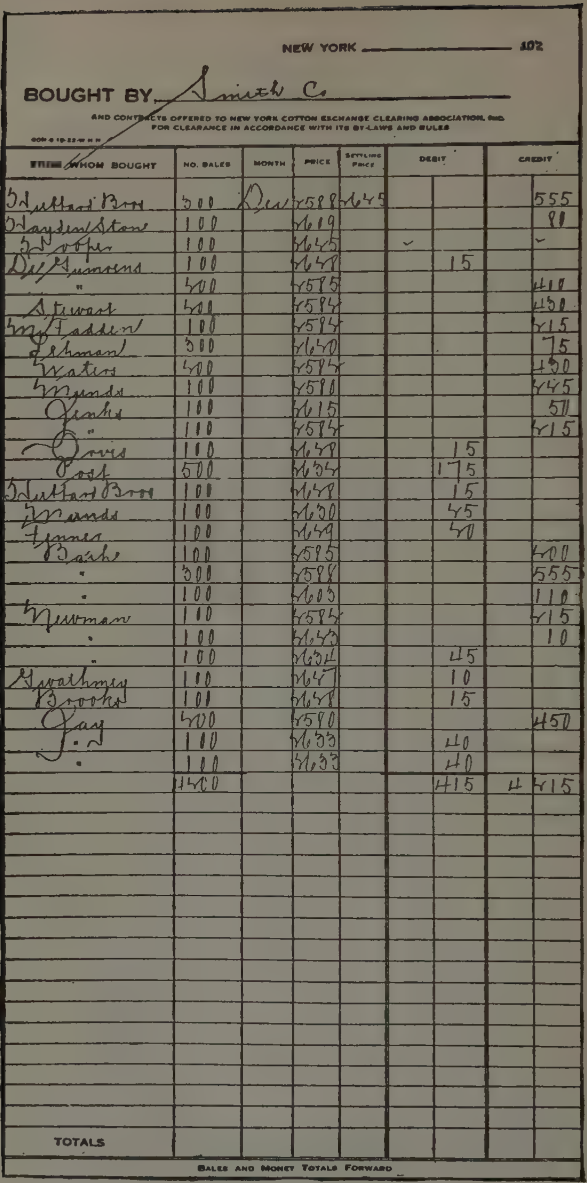
NEW YORK ____________ 192

SOLD BY Smith & Co

AND CONTRACTS OFFERED TO NEW YORK COTTON EXCHANGE CLEARING ASSOCIATION, INC., FOR CLEARANCE IN ACCORDANCE WITH ITS BY-LAWS AND RULES

TO WHOM SOLD	NO. BALES	MONTH	PRICE	SETTLING PRICE	DEBIT		CREDIT	
Hubbard Bros	300	Dec	2588	2625		555		
Post	200		2584			410		
Waters	100		2615			50		
Pfleiger	400		2577			960		
McFadden	100		2610			75		
Anderson	100		2630					25
Sorrells	100		2588			185		
"	100		2611			70		
Duggan	600		2575		1	500		
"	100		2617			40		
Bond	100		2630					25
Jones	200		2581			440		
Anderson	100		2590			175		
Hubbard Bros	100		2628					15
Bond	100		2627					10
Anderson	100		2588			185		
Louchheim	100		2615			50		
Anderson	100		2621			20		
Tenner	100		2620			25		
Newman	100		2585			200		
Moyse	100		2615			50		
Hayward Toby	100		2614			55		
Paine	100		2615			50		
Hoyse	100		2623			10		
Brooks	100		2580			225		
Wentz	100		2610			75		
"	100		2615			50		
"	100		2614			55		
	4000				5	510		75
TOTALS								

BALES AND MONEY TOTALS FORWARD



NEW YORK ______________ 192

BOUGHT BY Smith Co

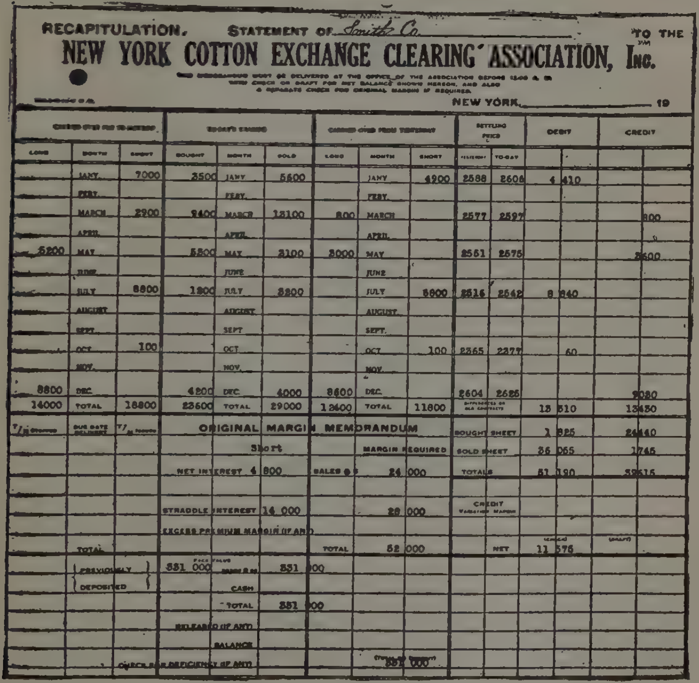
AND CONTRACTS OFFERED TO NEW YORK COTTON EXCHANGE CLEARING ASSOCIATION, INC.
FOR CLEARANCE IN ACCORDANCE WITH ITS BY-LAWS AND RULES

~~FROM~~ WHOM BOUGHT	NO. BALES	MONTH	PRICE	SETTLING PRICE	DEBIT		CREDIT	
Hubbard Bros	300	Dec	2588	2645				555
Hayden Stone	100		2619					80
Hopper	100		2645		✓			✓
DeCummins	100		2648			15		
"	200		2595					410
Stewart	200		2594					430
McFadden	100		2594					215
Lehman	300		2640					75
Waters	200		2594					430
Munds	100		2590					245
Jenks	100		2615					50
"	110		2594					215
Davis	110		2648			15		
Post	500		2634			175		
Hubbard Bros	100		2648			15		
Munds	100		2630			45		
Fenner	100		2649			20		
Bache	100		2595					200
"	300		2598					555
"	100		2603					110
Newman	110		2594					215
"	100		2643					10
"	100		2634			45		
Gwathmey	110		2647			10		
Brooks	101		2648			15		
Jay	200		2590					450
"	110		2633			40		
"	110		2633			40		
	4200					415	4	215
TOTALS								

BALES AND MONEY TOTALS FORWARD

The sales sheet is just the same except that it is printed in red. All these purchase and sales sheets are totalled as to bales, dollars debit, and dollars credit.

Another report which is known as the *Clearing House Sheet* is also required every day. On the sheets appear a column for all the months, then a column headed "Carried over from Yesterday," another column headed "To-day's Trading" and a final column, headed, "Carried over for To-morrow." The "Carried over from Yesterday" has a debit and credit column in dollars to bring the old contracts down to the settlement price. The day's purchases and sales are entered in the column for the day's trading, and the net result in bales is extended out to make up the totals carried over for to-morrow. The net of that column is the



RECAPITULATION. STATEMENT OF Smith Co. TO THE

NEW YORK COTTON EXCHANGE CLEARING ASSOCIATION, Inc.

NEW YORK, 19

									SETTLING PRICE		DEBIT	CREDIT
LONG	MONTH	SHORT	BOUGHT	MONTH	SOLD	LONG	MONTH	SHORT		TO-DAY		
	JANY.	7000	3500	JANY	5600		JANY	4900	2588	2606	4 410	
	FEBY.			FEBY.			FEBY.					
	MARCH	2900	2400	MARCH	12100	800	MARCH		2577	2597		800
	APRIL			APRIL			APRIL					
5200	MAY		5800	MAY	3100	3000	MAY		2561	2575		2600
	JUNE			JUNE			JUNE					
	JULY	6800	1200	JULY	3200		JULY	5600	2516	2542	8 840	
	AUGUST			AUGUST			AUGUST					
	SEPT.			SEPT			SEPT.					
	OCT	100		OCT			OCT	100	2365	2377	60	
	NOV.			NOV.			NOV.					
8800	DEC		4200	DEC	4000	8600	DEC		2604	2626		9080
14000	TOTAL	18800	23600	TOTAL	29000	12400	TOTAL	11800			13 510	13450

ORIGINAL MARGIN MEMORANDUM

Short		MARGIN REQUIRED	BOUGHT SHEET	1 925	24440
NET INTEREST	4 800	SALES @ $ 24 000	SOLD SHEET	36 055	1745
			TOTALS	51 190	39615
STRADDLE INTEREST	14 000	28 000	CREDIT		
EXCESS PREMIUM MARGIN (IF ANY)				(CHECK)	(DRAFT)
TOTAL		TOTAL 52 000	NET	11 575	

PREVIOUSLY DEPOSITED 331 000 | 331 000

CASH

TOTAL 331 000

RELEASED (IF ANY)

BALANCE

CHECK FOR DEFICIENCY (IF ANY)

331 000

interest on which original margin must be deposited. There are blanks at the bottom of the sheet showing the amount of original margin already deposited, the net interest shown on this sheet, and the amount required on that interest, and the amount additional to that already deposited, if additional margin is needed. There is another space showing the debit or credit needed to bring the contracts carried over from yesterday to the settlement price, the net debit and credit on all purchases for the day, the net debit or credit on all sales for the day, and a consolidation of all these items which is the amount of the check or draft to accompany the sheet. The usual sheet will be better understood from a study of the illustration on page 273.

Clearing-House Fines.—In an active market it takes some little time to make ready one of these sheets. The rules provide that they must be in the clearing house by a certain hour in the evening, but an extension of time may be secured on application. If the sheet is not in on time, or is not in at the hour specified in the extension, the delinquent firm is fined. There are also fines provided for all errors on the sheets.

Clearing-House Drafts.—The checks accompanying debit sheets are certified first thing in the morning by the clearing house. Then all sheets are compared, and the balance struck. If there are no errors the amount received must equal the amount claimed. After the balance has been secured, members may secure drafts for their credit balances, which drafts are accepted by the Corn Exchange Bank, and are, therefore, practically certified checks.

CHAPTER XXIII

NEW ORLEANS COTTON EXCHANGE

New Orleans Future Contract.—The other future exchange in the United States is in New Orleans where the Cotton Exchange was founded in 1871. The New Orleans contract for future delivery is as follows:

New Orleans, ..., 19..

In consideration of one dollar in hand paid, receipt of which is hereby acknowledged, ... of the City of New Orleans, State of Louisiana, have this day sold to (or bought from) .... of the City of New Orleans, State of Louisiana, 50,000 pounds in about 100 square bales of cotton, growth of the United States, deliverable from approved storage places for cotton in the port of New Orleans, between the first and last days of ...... next, inclusive, excepting holidays, as provided in Rule 38 of the rules of the New Orleans Cotton Exchange for the transaction of the Future Contract business.

The delivery within such time to be at seller's option, in not more than two approved storage places upon five days' notice to the buyer, as provided by the rules of the New Orleans Cotton Exchange.

The cotton to be dealt with herein or delivered hereunder shall be of or within the grades for which standards are established by the Secretary of Agriculture, except cotton prohibited from being delivered on a contract by the fifth subdivision of Section 5 of the United States Cotton Futures Act, as amended March 4th, 1919, and no other grade or grades (subject to the United States Cotton Futures Act, Section 5, and inspection and classification as provided in the Amendment to the United States Cotton Futures Act of March 4, 1919) at the price of ...... cents per pound for Middling.

In the case cotton of grade other than the basic grade should be delivered or tendered in settlement of this contract, the differences above or below the contract price, which the receiver shall pay for such grades, other than the basis grade, shall be the actual commercial differences determined as provided in Section 5 of the United States Futures Act, and the amendment of March 4, 1919.

Either party shall have the right to call for a margin as the variation of the market for like deliveries may warrant and which margin shall be kept good.

This contract is made in view of, and in all respects subject to the United States Cotton Futures Act, Section 5, as amended March 4, 1919, and to the by-laws, rules, and conditions not in conflict therewith established by the New Orleans Cotton Exchange.

(*Signed*).....................

There are forms of transferable notice which closely resemble those in New York and which we do not need to repeat here. The fluctuations are the same as in New York since it will be noted the New Orleans contract is also for 50,000 pounds in about 100 square bales. Each fluctuation of one one-hundredth of a cent per pound is $5 on a contract of 50,000 pounds, 100 bales.

Hours of Trading.—The City of New Orleans has Central Standard Time, one hour slower than Eastern Time, so that when it is nine o'clock in New Orleans, it is ten o'clock in New York. In order to have the hours of trading in the two markets synchronize, the New Orleans market opens at 9 on week days and closes at 2, and on Saturdays New Orleans opens for trading at 9 and closes at 11. The Daylight Saving Time in the summer is not observed in the city of New Orleans, so that in order to be open with the New York market, the New Orleans hours of trading are then from 8 to 1 on week days and 8 to 10 on Saturdays. New Orleans used to be open one-half hour later than New York, that is to say until 2:30 on week days and 11:30 on Saturdays, but during the War this extra half hour was given up, and the custom has never been resumed.

Calls.—The New Orleans market opens with a call, as is the case in New York, and there is a second call at 12 noon, and a third at 1:30 P. M. on week days. Unlike the New York Exchange, New Orleans has a second call on Saturdays at 10:45. During Daylight Saving Time the week day calls are at 8 A. M. (opening), 11 A. M., and 12:30 noon on week days; and at 8 A. M. (opening), and 9:45 A. M. on Saturdays.

Floor Brokers.—There are no floor brokers in New Orleans, such as execute future orders in New York. On the other hand, the New Orleans Exchange has a system of powers of attorney, which is lacking in New York. Provided a power of attorney is given the member by a firm, and provided that power is registered with the Exchange, that member may execute orders for the firm and be recompensed by them in such manner as they see fit. In other words, by this system of powers of attorney, the same result is attained as in New York by the use of floor brokers, except that a regular salary or other compensation is agreed upon, instead of the broker being paid a fee on each hundred bales bought or sold.

Floor Traders.—There is no special "clearance" rate of commission in New Orleans, so that members trading in and out of the market on the same day, must pay the full rates of commission charged a member. This makes the cost of scalping very high, and there are few such traders in New Orleans.

Visiting Members.—In New Orleans a man, with the consent of the Committee of Membership and of the Board of Directors may secure a card of admission as a "visiting member." He must not be "engaged in the cotton trade" and shall not vote or attend executive sessions of the Exchange.

No Clearing House.—There is no clearing house in New Orleans and the old methods of settlement prevail. There are both direct and ring settlements, the price on which rings are settled, being the close of the day before the ring is made. Bills for both direct and ring settlements must be rendered by 12 noon on the day following the settlement, and must be paid at 2 P. M. on that day, except that on Saturdays bills must be rendered by 10:30 A. M. and paid by 11:30 A. M. While Daylight Saving Time is in force in New York and the New Orleans Exchange opens for business an hour earlier than is normally the case, the time for rendering and paying bills is also made an hour earlier. All contracts are settled "earliest date and highest price." Thus, if Smith buys on October 1 a January contract of Jones at 19 cents, and buys on October 2 another January at 19.25; while on October 5 Smith sells Jones a January at 19.20, then the settlement will be against the purchase on October 1 at 19 cents, because that is the "earliest date." The result is that Smith will render Jones a bill for 20 points or $100. On the other hand, if Smith buys on October 1 a January at 19 cents and another at 19.25, and on October 2, there being no other January contracts open between Smith and Jones, sells to Jones a January at 19.20, then that will be settled against the purchase at 19.25, because as both contracts were bought on the same date, the "highest price" is settled. In this case, Jones will bill Smith for 5 points or $25.

Margins.—In the New York market we have seen that margins were called through the clearing house, but in New Orleans the old method of calling margins by individual firms still continues. Written notice of the call for margin must be delivered to the party from whom the margins are called, and when such notice is given before 12 noon, margin must be deposited before 1:30 P. M., except that on Saturdays margins called before ten must be deposited by 10:45. If margins are called after noon, or after 10 on Saturdays, then margins must be deposited by noon next day. The Superintendent posts at 10:30 A. M. and 12:30 P. M. the bid price of all months and margins must be deposited to those prices. The Board of Directors of the Exchange selects depositories for margin among the banks and trust companies of the city, the certificates are drawn to the order of both parties and are released "as the Superintendent of the New Orleans Cotton Exchange shall direct," precisely as was the case in New York prior to the clearing house. The original margins from one to five dollars per bale may be called on all contracts at the time of signing such contracts, or at any time prior thereto, and the full amount must be deposited in certified checks with the Superintendent within one hour of the call. The hours for calling and depositing margins are altered with the alteration of the trading hours during the period of Daylight Saving in New York.

Failures.—The rules regarding failed members and the closing out of contracts with such members are substantially the same as in New York. The system of Committees in New Orleans differs somewhat from that in vogue in New York, but the results are substantially the same.

Differences for Grades on Future Contracts.—The real distinction between the New York and New Orleans future contracts is to be found in the methods of fixing the differences on and off middling for grades other than middling, when such grades are delivered on future contracts. The law says that any market not designated by the Secretary of Agriculture as a spot market, shall fix differences on and off middling by taking the average of not less than five markets officially designated by the Secretary as spot markets. We have seen that New York fixes the differences on and off middling in this manner. New Orleans, however, was designated by the Secretary as a spot market and does not fall under this rule. The Act further provides that in the case of future contracts dealt in on an Exchange located in a designated spot market, the differences shall be fixed by a Committee of such Exchange, using as a basis the actual commercial differences prevailing in such market on the sixth business day prior to the day of delivery. It results that the differences on and off middling for grades other than middling delivered on future contracts in New Orleans shall be fixed by a committee of the Exchange.

Committee on Spot Quotations.—A Committee on Spot Quotations to consist of not less than three members of the Board of Classers is appointed annually by the Board of Directors in December. This Committee meets daily at 2 P. M. on week days and 11 A. M. on Saturdays and announces the quotations for spot cotton as sold in this market by factors and others on spot terms which shall show the actual commercial differences between grades in the manner and under the conditions prescribed in the United States Cotton Futures Act, section 6 and in accordance with such regulations as the Secretary of Agriculture may from time to time promulgate. Whenever the value of one grade is to be determined from the sale or sales of spot cotton of another grade or grades, such value shall be fixed in accordance with rules and regulations which shall be prescribed for the purpose by the Secretary of Agriculture.

Spot Market.—New Orleans does a very large business in spot cotton and the Exchange has a large number of rules and regulations in regard to this business. These rules cover "Cotton to Arrive," "Cotton out of Store," "F. O. B. Cotton" and all other forms of spot transactions. The Exchange, as is the case in New York, has an Inspection Bureau to attend to the weighing and inspection of cotton for delivery on future contracts. This Inspection Bureau may be used also in the spot business if desired. There are also rules for levee inspection, to protect cotton from theft and weather, warehouse inspection and compress supervision.

Hester's Figures.—As is the case in New York, the New Orleans Exchange has a statistical department whose figures are of value to the trade. The Superintendent of the New Orleans Exchange is Mr. H. G. Hester, and the New Orleans figures are often called after him, "Hester's Figures."

CHAPTER XXIV

OTHER AMERICAN EXCHANGES

Southern Exchanges.—There are no future markets in the United States outside the New York and New Orleans exchanges. There have been attempts to start outside future trading at other points, but the experiments have not been successful. The truth is that the two large future markets in this country, together with the similar market in Liverpool, take care of the necessary business in futures. Other future markets are not yet needed. The southern exchanges do regulate and control the spot business in their respective markets. In those places, designated for the purpose by the Secretary of Agriculture, we have seen that they also perform an important service by furnishing New York with differences on grades other than middling, from the average of which figures the New York differences are computed.

Spot Market Rules.—Each of the southern exchanges has a set of rules to govern the spot business in its particular market. The rules vary somewhat with local conditions and we need not go into them. The general practice of all the exchanges is to insist that any one doing business in the local market must be a member of the local exchange. Of course, they cannot enforce such a rule save by prohibiting their own members from doing business except through the Exchange, but that is usually sufficient. For example, if you are a nonmember of the Memphis Exchange and wish to buy cotton in the Memphis market, you must do your business through a member of the Memphis

Exchange. The object of the rule is twofold. In the first place it makes membership in the Exchange attractive and thereby strengthens its hold upon its members. In the second place, it gives the Exchange a control over the business in the local market, which control has been beneficial to the trade.

Statistics.—All these exchanges collect statistics of their local market which are of value to the trade at large. They furnish daily a statement of their warehouse stock, number of bales sold and price of middling. They also furnish a statement of the number of bales of "unsold" cotton in their warehouse stock. The term is used to describe the bales which have not yet been sold out of first hands. That is to say, "unsold" cotton is the stocks still in the hands of farmers, factors, or other commission men, not yet sold to the regular cotton merchants.

Quotation Service.—All these exchanges maintain a "continuous quotation" service for their members. Large blackboards are erected upon the floor of the Exchange, the quotation wire runs across the tops of the boards with the usual sounders so that the operators employed by the Exchange can take the quotations off the wire and write them up on the boards. Usually two, or possibly three, "active" months are quoted regularly, and the other deliveries only at the opening and close. In this manner the New York and New Orleans markets are always available to the members who have only to walk on the floor of their local Exchange, or telephone to the office, in order to obtain the latest quotations. The Liverpool cables, "12.30 opening and market prices," and the "2 P. M. cables" are also received, and one or two active deliveries are quoted in intermediate cables.

Spot Quotations.—We have seen that all these exchanges furnish middling quotations every day with their report of the day's sales. Ten of them are also designated by the

Secretary of Agriculture to furnish the quotations on which the "average" differences on and off middling for cotton delivered on New York future contracts shall be calculated. These ten Exchanges are: (1922) Galveston, Houston, Dallas, Little Rock, Memphis, Montgomery, Augusta, Savannah, Norfolk, and New Orleans. It is of the utmost importance that these quotations should be made up carefully and accurately. It is not always possible to quote every grade from actual sales, and there are regulations of the Department covering the fixing of differences by comparison with grades sold, so that the price of grades, in which no actual transactions have taken place, may be accurately fixed. It is a sad fact that these quotations have often been carelessly made up, and that they have also represented at times not the real market, but the market which some specific committee believed should exist for the good of the trade. The quotations were so irregular in 1919 that a meeting was called by the Bureau of Markets in Memphis in April of that year to devise methods of improvement. We shall have more to say on this subject when we come to discuss the relations between spots and futures.

Committees.—These exchanges all have their own arbitration committees to settle disputes in the local market, and they have also committees to handle charges of unbusinesslike or fraudulent conduct. They are of importance in controlling the handling of cotton and in raising and maintaining high standard of business conduct.

Associations.—In addition to the local exchanges, there have recently appeared associations of merchants in different sections of the belt, as for example the "Southwestern Cotton Buyers' Association." These bodies have rules and regulations covering purchases of cotton in the country, and they also hold annual conventions at which problems of the trade may be discussed.

New England Cotton Buyers' Association.—There are three such bodies in New England, namely, The New England Cotton Buyers' Association of Boston, the Fall River Cotton Buyers' Association, and the Providence Cotton Buyers' Association. There is also an association of cotton manufacturers, known as the Arkwright Club.

New England Mill Terms.—These four New England associations have joined to publish what are known as the "New England Mill Terms." These terms cover American cotton, as Egyptian and Sea Island are not included in the rules. Almost all cotton now sold in New England is covered by these terms. They provide that "short staple" cotton shall be shorter than an inch and an eighth and that "staple cotton" shall be an inch and an eighth or above, no matter from what territory the cotton may be shipped. United States standards of grade are to be used, and "even running" lots may include 5 per cent half a grade below the one specified, provided such cotton be offset by 5 per cent half a grade above the one specified. A sale of an "average" grade may have 5 per cent below the lowest grade specified, provided 5 per cent be a half grade above the highest specified. When a lot sold by actual sample does not equal the samples, the buyer may reject the entire lot if 50 per cent or more of the samples show the cotton not up to the "actual samples" submitted. If the proportion be less, then that proportion may be rejected, but the redrawn samples of the entire lot must be exhibited.

Arbitrations.—On short staple lots the differences between grades shall be fixed on the first business day of the month, and shall be the average of the differences on that day on the New York, New Orleans, and Memphis Cotton exchanges, and either the Savannah or Augusta exchange. The New England Cotton Buyers' Association, the Southern Cotton Shippers' Association, and the Arkwright Club shall each select and pay the salary of one classer, the three classers to act in case of cotton submitted to them for arbitration as to grade or staple or both. The classers do not declare the length of any staple, but simply judge the length in comparison with a type to be agreed upon by the seller and buyer, and which must be submitted at the time the samples are submitted. There is a Board of Appeal consisting of one member of the New England Cotton Buyers' Association, or one member of the Fall River Cotton Buyers' Association and the Providence Cotton Buyers' Association, one representative of the manufacturers and a third member to be selected by the first two. Any dispute as to whether a shipment conforms to the terms of sale, except as to actual grade and staple, the amount of allowance and the interpretation of the "terms" is referred to this Board of Appeal upon the request of either party at issue. The Board of Appeal is selected annually and upon such disputes their decision is final.

Other Provisions.—There are regulations as to redrawn samples so as to protect the rights of both parties. There are regulations as to terms of shipment. For example, "immediate shipment" means that the bills of lading must be signed within 14 days of date of sale. Cotton sold for specific months must have the ladings dated within the time specified in sale note. Invoice weights must be on the basis of 50,000 pounds to the 100 bales and must not vary more than 2 per cent from that figure. Invoice weights must be guaranteed, but the cotton must be reweighed within 48 hours of arrival according to certain specified rules as to scales and records. In case, on the reweights, the cotton loses 5 pounds or more to the bale, the cotton must be held ten days that the seller may have the bales weighed again to check the loss, if he so desires. In case the purchaser does not give access to the cotton within ten days, he must allow a quarter pound per bale per day until he does give access. On reweighed cotton an allowance is made of one-quarter pound per bale for samples, and one and a quarter pounds for bands. Tare is limited to 4.8 per cent of the invoice weight. There are also rules about grade and staple claims, about replacements of rejected cotton, and about insurance on shipments. This very brief summary of the "New England Mill Terms" is taken from the edition of August 1, 1920. The terms in full are important in connection with all shipments to domestic mills, particularly in New England, and for this reason the summary in the text is given.

Los Angeles.—This market is rapidly becoming of importance, particularly in connection with long staple "American-Egyptian" cotton. There is now a Cotton Exchange in Los Angeles, and there have been proposals to start a future contract market there in long staple cotton.

CHAPTER XXV

LIVERPOOL COTTON ASSOCIATION

Liverpool a Large Cotton Market.—We have remarked before that an importing country has its cotton business centralized at the port through which the bales are brought. In the case of Great Britain this port is Liverpool because of its proximity to the Manchester mills. We should expect to find a large volume of business concentrated in Liverpool, and as a matter of fact Liverpool is one of the largest cotton markets in the world. If we omit Germany, England imports more American cotton than all the rest of Europe put together, and this cotton moves through Liverpool. Before the World War Liverpool has often had in her warehouses a stock of over a million bales of American cotton, and since the War the stock has approximated that figure. The cotton business in Liverpool is by no means limited to American growth, for I have seen in a sample room of a Liverpool merchant cotton from America, Egypt, Brazil, Peru, East and West Africa, and the East Indies.

Liverpool as a Future Market.—It is not surprising there should be a future market in Liverpool, nor is it surprising that this market should be one of the three large future markets in the world. The dealings in American cotton for future delivery in Liverpool are large, and the market ranks with New York and New Orleans. But in Liverpool there is another future market, namely, in contracts for Egyptian cotton. This market offers the only real opportunity to trade in long staple cotton on contract, and is used extensively by dealers in staple cotton. Even merchants from the United States have made use of the Egyptian contract in Liverpool, and the market is coming to be known by manufacturers of both fine goods and tire yarns.

Liverpool American Future Contract.—We shall first take up dealings in the Liverpool market for the future delivery of American cotton. The contract for the future delivery of American cotton on the Liverpool Exchange is given on page 290.

Remarks on Contract.—You will note that this is a "Basis Fully Middling" contract with a low middling clause, that is to say, nothing below the latter grade can be tendered. The standards of classification are the Liverpool standards which we compared with the United States Government standards on page 75. Prior to 1917 for many years the Liverpool contract had been "Basis Middling," nothing below "Good Ordinary." In September, 1917, the British Government control through the Board of Trade required the Association to adopt an emergency contract for use in the War which called for Good Middling and permitted the delivery of nothing below Good Middling. This emergency contract on which no cotton was tendered was superseded in 1919 by the present form, trading in which began with the May, 1919, delivery and has continued ever since. When future trading first began in Liverpool in the early seventies, a great deal of cotton still came over in sailing ships, and for this reason the original future trading was in "coupled months," as, for example, January-February, March-April, May-June, July-August, October-November, and December-January. These were the active deliveries corresponding to the active months in New York, while the inactive deliveries were matched in the same manner, as, for example, "February-March." This double contract gave ample time for the cotton to leave an American port and be delivered on the future sale in Liverpool. Long before 1914 these coupled months had served their purpose, and when the Exchange reopened for trading, the

Liverpool Cotton Association
War Relief Stamp

LIVERPOOL COTTON ASSOCIATION, LIMITED

Contract Form 5b

100 Bales

AMERICAN COTTON DELIVERY CONTRACT NOTE

(Adopted 27th., January, 1919)

Liverpool.....................192..

Messrs.................................

Dear Sirs:

We have this day................ to / from you, to be delivered ex warehouse in Liverpool during......... ..48,000.. pounds AMERICAN COTTON net weight, to be contained in ... One Hundred ... American bales, more or less, of any grade not lower than LOW MIDDLING (equal in color to the standard and of fair staple), or if tinged or stained, of any grade which (irrespective of allowance to the seller for Staple) is at least equal in value to LOW MIDDLING (equal in color to the standard and of fair staple) at the price of.........pence per pound for Fully Middling (equal in color to the standard and of fair staple), with additions or deductions for such other qualities as are within the contract according to their value as compared with the spot value of FULLY MIDDLING (equal in color to the standard and of fair staple) on the day the cotton is tendered.

There shall not be more than one tender nor more than three lots for each 48,000 pounds and each 48,000 pounds shall be treated as a separate Contract. The additions or deductions for quality shall be settled by arbitration, but any lot not in accordance with the Contract, or any bales below, or of less value than LOW MIDDLING (equal in color to the standard and of fair staple) may be returned by the Buyer under the provisions of Rule 261.

In the event of Cotton of Staple better than 1 3/16 inch being tendered, the seller shall make an allowance to the buyer of 20 per cent of excess value of such staple cotton over 1 3/16 inches.

The Contract, of which this is a note, is made between ourselves and yourselves and not by or with any person, whether disclosed or not, on whose instructions or for whose benefit the same may have been entered into.

This Contract is on "Settlement Terms," and is therefore subject to Weekly Payments as provided for in the Rules.

This Contract shall not be cancelled on any ground and is subject to "The Rules of the Liverpool Cotton Association Limited" and in case of any question or dispute the matter shall be settled in accordance with the Rules as in force at the date of this Contract.

The Contract, of which the above is a note, was made on the date specified, within the business hours fixed in the Rules.

Yours faithfully,

....

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coupled months were superseded by a single month contract. It is necessary to remember the old double contract in Liverpool because all quotations prior to 1914 are given in the double months.

Interest.—The Liverpool contract is also an interest-bearing contract. One of the rules in the "settlement terms" requires that the one who makes the profit shall pay the other side of the contract interest from the date of settlement until the due date of the contract. The old theory was that if a man bought an October contract during the early summer, resold that contract in July at a profit, it was a matter of convenience to him to have the money paid him immediately in cash instead of waiting until October when the contract was due. So the custom of charging and receiving interest on contract settlements continues in Liverpool to this day. The same custom used to exist in the American market, but was done away with years ago. It is maintained in Liverpool, owing to legal opinion, that under the English law it increases the validity of the contract. So far as the American client is concerned, he will find the credit if he loses money, or the charge, if he makes money, in his account sales when he receives it from his Liverpool broker.

Fluctuations.—For years the Liverpool market fluctuations were first in sixteenths, then in thirty-seconds, and later in sixty-fourths of a penny per pound, but finally following the lead in New York the decimal system was adopted and is in force to-day. A Liverpool "point" is one one-hundredth of an English penny per pound of cotton. "Half points" are permitted, and prior to the War were in fairly common use. In the last eight years fluctuations have been so wide and so rapid that half points are seldom met with nowadays, but they are permitted, so that if you see the report of a Liverpool sale at 9.95½d. do not be surprised, as it will merely be another sign that we are returning to normal. In the Liverpool circular all quotations followed by the asterisk (*) are transactions in one contract, one hundred bales only.

Comparison of the English and American Point.—The Liverpool point is figured roughly to be worth double the American point. That is to say, if you wish to figure the comparative values of Liverpool and New York or New Orleans, double the Liverpool price. For example, if May Liverpool was quoted at nine-pence, it is figured as being equivalent to eighteen cents American. It is needless to say that this is a rough approximation, and that it is more accurately calculated by those who make a business of arbitraging between the English and the American market, but for rough and ready ring work it does very well.

Liverpool Weight.—As the Liverpool contract is "net," that is to say, with bagging and ties removed, the weight is 48,000 pounds to the hundred bales. The American future contract is "gross weight," so that the weight is 50,000 pounds to the hundred bales.

Hours of Trading.—The Liverpool market opens at ten A. M. Liverpool time, and closes at 4 P. M. The directors have the power to extend trading on days of Government reports so that the Liverpool market will be open for trading when the report is received. Prior to 1914 the market was open on Saturday, but that is not the case at the present time.

English and American Time.—There is five hours' difference in time between New York and Liverpool. It is five A.M. in New York when the market in Liverpool is opening at ten A. M., and it is eleven A. M. New York time when the Liverpool market is closing at four P. M. It results, therefore, that New York and Liverpool are open together between three and four P. M. Liverpool time and between ten and eleven A. M. New York time. Similarly the New Orleans market is open from nine to ten New

Orleans time during the hours of Liverpool trading. As Liverpool has daylight saving, New Orleans is open with Liverpool from eight to nine A. M. New Orleans time during the months when daylight saving is in force. It is necessary to remember the hours when the markets are open simultaneously because a great deal of arbitrage business is constantly done between New York and Liverpool.

No Calls.—There is no opening call in Liverpool and no other calls. The market opens with general trading in all deliveries and so continues until the close. The greatest time of activity is the hour from three to four when the American markets are open. This does not mean that Liverpool always follows New York. It frequently does follow New York, but sometimes Liverpool will move one way or the other before New York opens, and then it is the American markets that follow Liverpool.

Clearing House.—The Liverpool market has no clearing house for contracts, and, while it has a clearing house for settlements, it is worked in an entirely different manner from the American custom. In the first place, all trading in Liverpool is on the basis of *weekly settlements*. On Mondays at eleven A. M. the prices are struck by the Future Committee, and on those prices statements are made up, carrying interest pro and con and must be in the clearing house on the Wednesday morning. Checks for differences must be paid into the Cotton Bank by noon on Thursday. Any member failing to make payment in time would be posted as a defaulter. In other words, all contracts are written up to, or down to, the market price at eleven Monday morning and the settlement is due Thursday at noon.

No Variation Margin.—No margins or payments are allowed to pass between members except in the settlements. In fact, such payments are strictly forbidden by rule, as they are regarded as preferential. The whole system is in effect a week's credit as between member and member trading in the ring. A member may make any arrangement he likes with his client.

Cotton Bank.—The Cotton Bank is worked through the medium of the Bank of England, which is paid so much a year by the Liverpool Cotton Association for working the account. Suppose Jones and Co. owe £5,000 on the week's settlement. They make out a check in favor of the Bank of England "account the Cotton Bank," and the Bank of England then gives the clearing house a credit voucher on account of Jones and Co. for that amount. Meantime Jones and Co. will give each firm to whom they owe money on settlement a credit voucher on the clearing house until the balance is exhausted. In the same way they will receive credit vouchers from those who owe them.

Clearing Contracts.—The clearing house only clears contracts when a tender or docket is started., but of course a single hundred bales may circulate and easily wipe out 20,000 or 30,000 bales before they stop. A great many contracts are practically cancelled between members by being "rung out."

Tenders.—In Liverpool a tender on future contracts is called a "docket." Tender days are Mondays, Wednesdays and Fridays, also the first and last days of the month if falling on any other day, market holidays excepted. Dockets are issued through the clearing house at noon on the day appointed and a firm receiving a docket, unless they have sold it on to some one else and have given particulars of the sale to the clearing house, will be required to take delivery of the cotton within ten days, payment cash against delivery. They can, however, resell, usually at a small discount as a "back date." Each docket consists of about 100 bales, net weight to average 48,000 pounds, and must consist of not more than three qualities or marks. The quality and staple are determined by arbitration, and the value on and off middling for other grades are determined by the differences prevailing the day the cotton is tendered.

The largest quantities tendered on docket during one season were: 1910-1911, 279,700 bales; 1911-1912, 225,000 bales; 1912-1913, 205,700 bales; 1913-1914, 353,400 bales. The largest amount of money ever passed through the clearing house in a single day was £3,207,700, and the next largest was during the "Sully Year," £2,156,000.

Failures.—Suppose a firm finds that it cannot meet the settlement the coming Thursday. Usually such firm does not wait until the actual day, but a few days in advance notifies the President by letter that it cannot meet its obligations. This letter is read to the ring by the Secretary from the platform alongside the trading pit. At once, within two or three minutes, the "American Arrival Committee" is called, and fixes the prices at which contracts are to be settled. These prices are supposed to be the market value of the respective months at the time the failure was announced. In the meantime, those having contracts with the failed firm buy them in or sell them out as best they can. All claims on the failed member's estate must be based upon the prices fixed by the committee. The Clearing House Committee are also called together at the same time to confirm the prices struck and to settle any details as to spot transactions or dockets in which the estate may be interested. A committee is usually appointed from among the creditors to look into the affairs of the failed firm and ascertain whether there has been any gross overtrading, dishonest or unbusinesslike conduct, what was the cause of the failure, and any other facts. This committee afterwards reports to the Board of Directors who take the matter into consideration in case the failed member, having made a settlement with his creditors, seeks reinstatement.

Egyptian Future Contract.—The contract for Egyptian Future Delivery is:

Liverpool Cotton Association
War Relief Fund Stamp

LIVERPOOL COTTON ASSOCIATION, LIMITED

Contract Form 8b
50 Bales

EGYPTIAN AND/OR SOUDAN COTTON DELIVERY CONTRACT NOTE

Liverpool.....................192..

Messrs................................
Dear Sirs:

We have this day.................... to/from you to be delivered ex warehouse Liverpool during........ ....36,000.... pounds Egyptian and or Soudan Cotton net weight to be contained in . . . Fifty . . . bales, more or less, not lower in grade than GOOD FAIR, of any growth at the price of........pence per pound for FULLY GOOD FAIR SAKELLARIDIS Standard quality of the Liverpool Cotton Association, Ltd., with additions or deductions for other qualities according to their value as compared with the spot value of FULLY GOOD SAKELLARIDIS on the day the Cotton is tendered, allowance to the seller not to exceed 5d. per pound. Soudan Cotton may be tendered on this Contract, provided it is not grown from American Seed and the staple is not inferior to the average staple of Upper Egyptian Cotton.

There shall not be more than one tender nor more than two lots for each 36,000 pounds, and each 36,000 pounds shall be treated as a separate Contract. The additions or deductions for quality shall be settled by arbitration, but any lot not in accordance with the Contract, or any bales below or of less value than the grades tenderable, may be returned by the buyer under the provisions of Rule 262, and if more than 20 per cent of any tender is not in accordance with the Contract the whole tender may be returned, under the provisions of the same Rule.

The Contract of which this is a note is made between ourselves and yourselves and not by or with any person whether disclosed or not, on whose instructions or for whose benefit the same may have been entered into.

This Contract is on "Settlement Terms," and is therefore subject to Weekly Payments as provided for in the Rules.

This Contract shall not be cancelled on any ground and is subject to the Rules of the Liverpool Cotton Association, Limited, and in case of any question or dispute the matter shall be settled in accordance with the Rules as in force at the date of this Contract.

The Contract, of which the above is a note, was made on the date specified within the business hours fixed in the Rules.

Yours faithfully,

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Egyptian Market.—The fluctuations in the Egyptian future market are supposed to be one one-hundredths of a penny, the same as with American futures, but the trading is by no means as active. In fact, the market is a very limited one, especially since the War and the weevil together have raised the price of all long staple cotton to such remarkable levels. The result is that prices in the Egyptian market are "jumped" very badly, the market sometimes moving 20 or even 50 points between trades. A fluctuation of 10d. per pound has been known between one day and the next. The clearing house handles contracts for Egyptian cotton precisely the same as it does contracts for American cotton. The prices are struck on Mondays at eleven and settlements made on Thursdays. Tenders are made on docket in the same manner, but they do not amount to more than a few hundred bales.

The Liverpool Cotton Association issues large official forms, both for contracts between members and also as between members and clients. The forms used above are those in use between members and members trading in the ring. The firm issuing the contract note always has its name printed in red ink diagonally across the face of the form to protect itself against any unauthorized use of the contract forms.

CHAPTER XXVI

TRADING IN THE LIVERPOOL MARKET

Liverpool Spot Market.—Liverpool is the largest cotton market in Europe, and it is probable it is also the largest spot cotton market in the world. It deals in cotton from all countries, but we are primarily interested in its handling of American cotton. The system for handling American cotton in Liverpool is quite different from that in any market in this country. This is a natural result of the fact that all cotton handled in Liverpool is imported over some three thousand miles of ocean, so that special machinery has been developed.

Importing Houses.—First, we have the importers, or the merchants who bring the American cotton to Liverpool. They may buy it in the United States in any one of several ways. Either they may buy direct from Liverpool by cable from various southern merchants, this being the "CIF and Six" cotton which we have already mentioned, the abbreviation meaning "Cost, Insurance, Freight and 6 per cent tare"; or the Liverpool importers may buy through their own agencies in the South; or through their own representatives or partners traveling through the belt.

Selling Brokers.—The importers usually have "selling brokers" to assist them in reselling the cotton after its arrival in Liverpool. In fact, some of the smaller importers are often financed by the richer selling brokers, who then handle the cotton for them.

Spinners' Buying Brokers.—Neither the importer nor the selling broker deal direct with the spinner, who almost invariably buys through a "buying broker." These are the nearest approach to the American "spinners' brokers." They handle all the business for the mills they represent, even attending to such future contract business as the mills may require in the line of hedging the sales of yarns or goods, or even the stock of cotton on hand. Often these buyers do nothing but buy for their mills. They will neither import cotton, nor offer cotton for sale, but simply act as buying brokers for the mills they serve. Some of the old line spinners will not deal with any one who offers cotton for sale on his own account. A number of the newer "limited" companies operating mills are largely controlled by their buying brokers. These take a large number of shares, and in the case of the more wealthy firms, also lend the mills money. Of course the condition is made that the mill shall do its buying through this particular firm of buying brokers. Some of the larger importing houses also make an arrangement of this kind with some mills. Then it obviously does not matter whether the firm is acting as importer or as buying broker. It is all the same, they supply the mill as per agreement.

Merchant Brokers.—These firms import very largely but sell a greater proportion of the cotton to their own spinners. They will also sell on commission for clients. They also sell on the open market, or through selling brokers, just as the ordinary importer does. They do not force their cotton on the spinners with whom they have business arrangements.

Unwritten Rule.—There is an unwritten rule in Liverpool that, except where there is an actual connection or arrangement with certain spinners, cotton shall not be sold direct to the mill but only through the medium of a buying broker. This rule is pretty well observed, although there are some large firms which have begun to sell wherever they can, irrespective of the buying broker. We can thus see that, even in Liverpool, conservative as the market is, there are signs of the slow change, eliminating additional middlemen.

Liverpool Sales.—The sales of spot cotton in the Liverpool market are large at all times, but in certain weeks of the season, not the same in each year, when for some reason the spinner in Manchester desires to supply himself, the sales will mount to many thousands of bales. Thus, in the season of 1920-1921 the smallest weekly sales were in the week ending December 24, 1920, all kinds, 8,000 bales, and American, 6,000 bales. These figures were again reached in May, 1921, during the British coal strike. The largest weekly sales were for the week ending July 15, 1921, all kinds, 68,000 bales, American, 43,000 bales.

Payments Through Clearing House.—In former years all spot payments were made by each individual firm in cash, the carrying around of large sums of money being most dangerous. A large robbery finally put a stop to this practice and all spot payments are now made through the clearing house. Suppose a spinner owes his buying broker £10,000 for cotton bought for his account. He instructs his bank to pay the Cotton Bank £10,000 to the credit of his buying broker. The Cotton Bank then gives the buying broker a credit voucher for that amount and he can, in turn, issue credit vouchers against it to the firms from whom he bought the cotton.

Liverpool Arbitration.—A great deal of cotton is sold both to Liverpool and to the continent on ''Liverpool Arbitration.'' Arbitrations in Liverpool are conducted on the following system. The shipper and buyer each appoint a member of the Liverpool Cotton Association to act for them. Formerly these arbitrators had to be appointed from a board of eighteen ''Official Arbitrators,'' but this has now been dissolved, and any member of the Association may be selected. Sometimes there are two sets of samples, one drawn by the seller and one by the buyer, but more often there is one set drawn by the seller's men and the buyer's men acting together. The arbitrators then examine the cotton carefully, and, if they cannot agree, a third member of the Association is called in as umpire. There is a rule that the arbitrator who is furthest away from the umpire's decision pays the latter's fees. For instance, on an arbitration A says the cotton should be .03d. off, and B says it should be .12d. off. Mr. C, the umpire, is called in and views the cotton, writing his award upon a piece of paper. Then C says: "What is the question?" and they call off .03d. and .12d., respectively. The umpire then looks at his paper and shows it to the others, showing that he had marked down .04d. off as the award. B is the furthest away from the decision, and he has to pay the umpire his fee, which is one-half of B's arbitration fees. The decision is subject to an appeal by either party to the "Official Appeal Committee." This committee consists of nine members, supposed to be the pick of the arbitrators and the best judges of quality in the market.

CIF and Six cotton is usually sold with the clause "No allowance to sellers," but with this provision printed in the contract: "Should arbitration be demanded by the *buyer* the contract shall then be subject to mutual allowances." This clause was adopted because years ago a certain class of buyers, generally from the continent, would request an arbitration as soon as the ship entered the Mersey, on the ground that they might get something, and at any rate only risked an arbitration fee. Now the rule has stopped this, because the arbitrators sometimes make an allowance "on," thereby forcing these buyers to pay a higher price.

Differences on or Off for Grade.—The matter of grade differences is a subject for mutual arrangement. Cotton is sometimes sold on "fixed differences" or the differences prevailing at the time of shipment. If nothing is specified on this point, then the cotton is subject to the differences when arbitrated. Cotton must be arbitrated within ten days of arrival and the differences are those prevailing on the day of arbitration.

Disputes Over Liverpool Arbitration.—Liverpool arbitrations have been the cause of much hard feeling on the part of the American shipper whose grievances are in part his own fault. In the first place, many shippers fail to understand that the cotton will be classed, not by grade, but by so many points in value on or off the grade sold. This can be made a very technical method of classing cotton, and it is certainly a very close way of doing so. It is difficult to get cotton even running, it is difficult to get all the bales exactly equal to a type. Now, if each bale is to be penalized a few points, there will be a claim when the shipper did not expect one, then he is irritated. Of course there soon comes a point where a claim is justified, and where indeed the shipper expected one. When you are shipping cotton from the interior, it is not always possible to make just the shipment you might wish. Sometimes the cotton you bought to go on the order is stalled in a country compress, sometimes it is not unloaded from the country owing to a block in the press, sometimes it is wet and cannot be shipped, then the shipment has to be made as best you can. It will be as close as you can get to the quality, but you are aware there may be a claim. When the award of the arbitration is received the amount is staggering, and the reason is that the differences between grades have spread while the cotton was in transit, and the arbitration was made on the arrival. The importer in Liverpool naturally feels that he was not responsible for the circumstances which brought about the shipment of cotton not quite up to the quality sold. On the other hand, he passed the sale on and was called upon to make good the difference in value, and feels the shipper should pay the bill. A merchant in the South feels that he has been unmercifully penalized for a trivial fault, for which, after all, he was not to blame. The net result is more or less bad feeling on both sides.

The fairest solution would seem to be that the buyer and the seller should divide the risk of the differences between them. It is useless for the importer to say that the shipper would have no loss did he ship according to contract. Assuming that the shipper be honest, and on any other supposition it is foolish to consider the case, he cannot always avoid claims. A good deal of the friction could be fairly avoided by an agreement that the differences of grade of the date midway between the date of the bill of lading and the date of arrival be taken as the basis of settling arbitration awards. The importer should remember that, after all, the shipper trusts a good deal to the Liverpool Cotton Association when he sends his cotton three thousand miles away to have its value decided by arbitrators, only one of whom he is likely to know in person.

It is not likely that any such suggestion would be favorably received, so that the friction over Liverpool awards will continue so long as cotton is exported. The shipper has two or perhaps three remedies. He can refuse to sell cotton Liverpool arbitration. He can in that case sell to the Liverpool firms with offices in this country and let them take the risks of the quality and of the differences on arrival at Liverpool. He can make an arrangement with the firm with whom he deals as to the date on which differences for arbitration are to be taken, selecting, for example, the date of shipment. Then the importer assumes the risk of the difference widening and will probably wish to be reimbursed by getting his cotton at a lower price. Finally the shipper can raise his price to compensate for the risk, but in that case he may do very little Liverpool business. The firm for which I worked in the South years ago would not sell cotton to Liverpool on description below the grade of middling, and would not sell at all after a certain date in the fall, if they could avoid doing so. The trouble is that when domestic business is slack, the banks are pressing, and interest charges are mounting, the place where you can always sell cotton at a price is Liverpool. Consequently most merchants are glad to keep in touch with their Liverpool correspondents.

Liverpool Importer Risks.—It should be frankly stated that the risk is not all on the side of the American shipper. The importer assumes a heavy risk in paying for cotton that he will not be able to examine short of six weeks or two months. He has suffered severely in the past from petty swindling on the part of disreputable American firms all the way to such downright frauds as astounded the cotton trade in 1910. Of course the importer is partly to blame—in 1910 he was almost wholly to blame—for doing business with firms having a shady reputation, simply because he could buy from them cheaply. Black sheep exist in all flocks, and, while the American cotton merchant has reason to be proud that his flock contains so few, still he should remember that a Liverpool importer who has met one of these gentry will be shy for some time to come.

Loss in Weight Claims.—Loss in weight disputes have been largely eliminated by the "mutual allowance" system, but they still crop up now and then. The Liverpool man asserts that the American adds to his weights, to which the latter retorts that the 6 per cent tare will take care of that, and that he has a claim anyway. The practice, however, has happily gone more or less out of use. On the other hand, the claims for "internal damp," or as the victim used to call them "infernal damp," which ran the "adding" a close second, have also come under such control that you do not hear of them to the extent that was once the case. We can leave them both to mildew. The Englishmen object that the offense of adding to the weights is heinous, while the damp in the bales is an actual loss to the spinner besides injuring the machinery. The American will retort that the adding did no one any real harm because the tare rarely equaled 6 per cent and there was in any event a loss in weight claim, while the internal damp was due to the sea air, did no real damage, and was simply another device for making a claim. They may both be right.

Other Foreign Cotton Exchanges—*Havre.*—There are three other cotton exchanges which have contracts for future delivery. Havre, France, has had for many years trading in fifty-bale contracts American cotton. Prior to the World War the Havre quotations were posted daily on the New York Cotton Exchange, although there was little or no American trading in them. There used to be quite a bit of arbitrage between Liverpool and Havre and New York and Havre, but it was always done from the other side, not from New York. It is an interesting commentary on Government management that cables between Havre and Liverpool were regularly dispatched via New York. The cable from Havre to New York was privately owned and operated and so was the cable from New York to Liverpool, while the direct Liverpool-Havre lines were government owned and operated. A message sent from Havre to New York and resent from New York to Liverpool would arrive in Liverpool hours ahead of a message sent on a direct government line.

Bremen.—Prior to 1914 the Bremen Cotton Exchange had been making efforts to secure all the Continental business, a great deal of which had always been done in Liverpool. Bremen had succeeded to a greater extent than was realized, and they thought they were in a fair way to rival Liverpool. They proposed to start a ring for future trading, and they proposed to get firms on the Continent to buy cotton "Bremen arbitration and class" instead of "Liverpool arbitration and class.'' Of course, the closing of the port of Bremen in 1914 put an end to all these fine schemes, and it remains to be seen what place Bremen will play in the future.

Alexandria, Egypt.—There has been a future market in Alexandria for a number of years. This market was closed during the War, when the Egyptian cotton trade was under Government control. The quotations from Alexandria used to be seen around the Boston market, and they were also printed from time to time in the market bulletins, published every fifteen minutes or so by a news firm in the New York market. The Egyptian future ring in Liverpool is better known and more frequently used by merchants in this country. In a speculative sense the Alexandria market has been important at times. During the first decade of the century there were some very large speculative operators in Alexandria whose trading extended first to the Liverpool market, and eventually to the New York market.

PART III

MARKETING AND HEDGING

CHAPTER XXVII

HEDGING

Preliminary Remarks.—We have seen that the change brought about in cotton marketing by modern methods of communication was the fact that merchants now deal in time and not in distance. All modern business slowly came to be done ahead so that the mill is making goods in September to be sold by the retailers the following spring. Such methods require that the merchant sell the spinner his raw material ahead, and to do this the merchant must have some means of protecting himself against the possibility of such loss as would ruin him. A merchant cannot undertake in the month of July to sell cotton for delivery in December or January unless he is protected as to an advance in price. The cotton is still growing on the plants and by the time he is to buy the bales to fulfill his sale to the mill, the weather may have ruined the crop and the price have advanced far beyond the level at which the sale was made. The gradual development of modern methods of communication brought about the necessity of doing this forward business, but alongside the cable and the telegraph had grown up a method of trading to protect the merchant. We have studied the details of future trading and future contracts in the three large Exchanges, New York, New Orleans, and Liverpool, and we have now to study the manner in which these contracts are actually used by the cotton merchant. He calls the use of the future contract for protection "hedging," a word understood perfectly by those in the cotton trade, and apparently not understood in the least by any one else. Even the dictionary shies at a definition, for all that can be found in Webster's Unabridged is the statement: "To hedge (com) to safeguard one's self from a loss on a bet or a speculation by making compensatory arrangements on the other side." So far as it goes that definition is correct, but it is sadly lacking. If there is anything not connected with hedging in cotton, it is betting, while, if the methods of hedging were entirely perfect, speculation would be utterly eliminated.

Trade Insurance.—Hedging has also been defined as "trade insurance," and this is a clever definition, because it accurately describes hedging from the standpoint of the individual merchant. If a shipper sells in the month of July to a mill cotton to be delivered the following November, he must have some protection, or "insurance," that in November the price will not be so high that his sale will net him a ruinous loss. This insurance he obtains by the purchase of future contracts in one of the three markets against his sale to the mill. If the price of cotton advances, then will the price of his future contract, his "hedge," advance, so that while he may be compelled to pay a high price for his cotton in the South in the fall, yet the profit on his future will offset the loss on his spots. Conversely, if he buys a lot of cotton South for which he has no immediate use, he may sell futures against that cotton. Then, if the market declines, so that when he can resell his spot cotton he has a loss, he will recover that loss by the profit made by the repurchase of his future hedge. Such trade insurance is just as essential to the merchant as fire insurance, without which he dare not carry a hundred bales of cotton overnight. Consequently, the "trade insurance" definition of hedging is correct, but it does not go far enough.

Modern Markets.—Such a definition leaves the impression that all there is in hedging is to put upon the shoulders of some one else, presumably a speculator, the burden of risk, which the merchant cannot afford to carry himself. If that were the sole result of the great future markets, they would never have attained their present size and efficiency. It is true that a speculator may be the one to whom the merchant shifts the risk and it is true that speculators make money because they do assume such risks. On the other hand, the percentage of speculation in the future markets is amazingly small—the figures secured by actual observation and tests will not be credited by the outsider. If it were the speculator alone on the one hand and the merchant desirous of protection on the other who dealt in futures, the markets would soon dry up, because there would be far more hedges offered for sale in the fall, when the crop is moving, than the speculator could absorb; and far more contracts wanted in the summer than the speculator could provide.

Buyers and Sellers United.—The world is a very large place and the cotton trade is carried on all over the world. The mill in New England has a demand for goods and buys cotton ahead. The merchant from whom that mill has bought the spots wishes to purchase futures against his sale. He sends an order to New York for the contracts, and the broker buys them, possibly from a speculator, but more likely from some one in the trade with hedges the other way to sell. It may be a merchant in Genoa who, having held contracts against a sale of his to a mill in Milan, now wishes to resell because he has bought the cotton South for shipment. It may be some other American merchant has secured cotton in the country for which he has no market, and is in his turn selling hedges. It makes no difference to our friend, nor to the American mill, all they know or care is that they can buy the cotton because there will be no difficulty in procuring the needed protection in futures. It is unthinkable that before a merchant should accept an order he should have to stop and figure out from whom he can buy. He could not afford the time, money, or energy to be cabling and wiring all over the earth for a seller. Modern business could not be carried on in that manner. The cotton trade is accustomed to instantaneous acceptance of offers, and this is possible because through the future markets all the buyers and sellers are concentrated in some one place between the hours of ten and three. An actual illustration of this buying and selling will be given a little later.

Hedging a Growth.—It must not be supposed that hedging was invented by the cotton trade overnight. On the contrary it was a growth, and while the rapid development of the cable and telegraph made that growth a very quick change in business methods, still that change was going on slowly for a number of years. We have seen how future contracts evolved out of the risks in shipping cotton across the ocean. In the same manner and at the same time there grew up the use of future contracts for hedging purposes. At first the so-called "forward sales" were used, merchants selling to a mill and then buying a contract from some one in New York against their sale. It is said that the old firm of H. M. Taber and Co. were the first to do this business, and that others followed when they were seen to be successful. I am reminded here of an anecdote related to me some years ago by an old-time cotton man, now dead. The story impressed me at the time as entertaining, but I failed to secure names and dates, and now I cannot verify it. However, it will well illustrate the growth of hedging.

Anecdote on Origin of Hedging.—In the old days the Boston merchants used to send clipper ships to make a round-the-world voyage to China. When the trade commenced, the first stop was the Northwest Coast for furs, then to Honolulu for sandalwood, thence to China for teas in exchange for the wood, and then back home, either direct, or through London. In the late sixties the Northwest trade had disappeared, but the balance of the voyage was the same, except that in place of the furs the ships now carried out cotton goods made in the New England mills to be sold in China. The clippers had either a supercargo to do the actual trading, or they had a captain who had been selected for mercantile ability as well as seamanship. Indeed, the supercargo and the captain often had an interest in the vessel. On one occasion, just after the close of the Civil War, the supercargo and the China merchant, having finished their business, sat around the cabin table with a bottle of sherry and some biscuits. The merchant remarked that he liked the goods and he liked the price. Could not the supercargo contract with him to deliver an equal amount of goods at the same price his next voyage? The supercargo thought that an excellent idea, but replied that he dared not make such a sale until he had gone home and consulted the owners. It was then agreed the proposition should be put up to them, with the idea that on his next trip the supercargo would be in position to sell goods for the following voyage. When the ship returned to Boston the supercargo reported the conversation and heartily advocated accepting the proposal on the ground that by so doing half the risk of the voyage would be eliminated, because the goods would be sold before ever the vessel sailed. No risk of the Chinese market would need to be considered. The merchant readily agreed to that, but where was he to get the goods so far ahead at a fixed price? He consulted the mill owners, who were also much struck with the idea, because they could run ahead and keep their people steadily employed instead of all the time shutting down for orders. But, they in turn said, where do we get cotton at a fixed price, and unless we do, how can we guarantee the goods' price? So the mill went to its cotton merchant and asked him to contract ahead for the cotton to make these goods. At first he said it could not be done, because no one would sell cotton at a fixed price before it was planted. Finally, however, the merchant succeeded in making a contract with another merchant to sell him cotton for long distance delivery at a handsome premium. It is probable the contract was made by Messrs. Taber who were the early merchants in this business, but at any rate it was made. The merchant "hedged" himself by buying contracts for "forward delivery" as far forward as he could, and then trading in and out on them, using his premium to pay the charges. It became known in the trade that this business had been done, and it was not long before there was considerable of this sort of trading going on in the forward contracts. Of course, when future trading began, this sort of hedging went on the Exchange, together with the buying and selling of merchants engaged in shipping to Europe, which we looked into in the chapter on the origin of the future markets.

Hedging in Liverpool.—Meantime much the same sort of thing was going on in Liverpool. The Manchester mills wanted to sell goods ahead to both India and China, and they wanted protection. It occurred to an old-time merchant, Mr. John Rew, that with the new Atlantic cable he could sell cotton "to arrive," and then buy the cotton in the South within 48 hours instead of waiting until cotton had sailed or was about to sail and then getting the samples by steamer. Of course, this put Mr. Rew in a position to sell ahead to the Manchester mills, and it was not long before other people were doing the same business. When trading in futures began in Liverpool, it was in futures that this sort of forward business was done, just as had been the case in New York.

Modern Illustration.—The best definition of hedging is probably about as follows: "Hedging is trade insurance carried on in such manner as to make a world-wide market for instantaneous buying and selling." We can see just what such a definition means by the following actual experience. Prior to 1914 the largest cotton mills in Russia did their buying through a certain firm which had offices in Bremen, Liverpool and various American markets. Among their American offices was an agency in New York which handled most of their futures. In old-time Russia the cotton goods business was transacted largely at the Nijii Novgorod Fairs, where merchants came from all over the empire to buy goods. On the return trip, across the steppes of south Russia into Turkestan and Persia, or out into the wilds of Siberia, these cotton goods were sold, and if trade were good, orders for the next fair would be taken. The condition of Russian trade and the demand for American cotton in Russian mills depended very largely upon the success or failure of the Nijii Novgorod Fair. You could see articles in all trade papers as to whether this fair was a success, and cotton market letters always commented upon the sales of goods at that time. Now, in the particular year to which I have reference, the fair was a great success and the Russian mills wanted a large supply of cotton. Consequently the firm mentioned above had orders for a great deal of cotton, and all through the month of August they were heavy buyers of futures against their sales to the Russian mills. For purely technical reasons, into which we do not need to go, most of the futures they had purchased were for October delivery New York. At one time they were said to be long twenty-five thousand bales of October New York hedges against their sales of cotton to the Russian mills.

One day they decided that they did not care to carry any more of these contracts themselves, and my firm received an order to buy five thousand October for their account. Business was not very active, and we expected the purchase would make us buyers "on balance" for the day. I remarked as much at the close to the order clerk, and he said, "No, we don't buy net. Texas sold all the afternoon and they offset that order. We actually sell a few hundred net." He was quite correct, but concealed in that simple statement is the whole secret of the modern system of marketing. The crop was beginning to move in Texas in some volume, the demand was not good enough to take care of all the receipts, and the interior merchants were buying the cotton and selling futures in New York against it. That is a simple matter, but those contracts were bought by the large merchants who had sold cotton to the Russian mills, who had sold goods to the caravans bound for Siberia, Turkestan, and Persia. The producer of cotton in Texas and the ultimate consumer of cotton goods in Persia were brought together in New York, each not being aware of the existence of the other. Of course to the Texas merchant and to the firm selling to Russia the sale and the purchase were simply trade insurance, and the whole operation so simple as not to require thought. On the other hand, in the broad sense hedging brought together with no effort the cotton farmer in Texas and the Moslem consumer in Persia. When you think of the business in future contracts, you must look beyond the merely technical methods we shall spend so much time upon. You must visualize the fact that it is through these large future markets that it is possible for all the buyers and all the sellers to come together at any moment between ten and three.

Volume of Transactions in Futures.—For the sake of clarity we have analyzed a set of transactions in futures, where the dealings were almost direct. This does not always happen. In our illustration the firm selling the Russian mills bought the cotton themselves in the South and also did their own hedging. That made it possible for us to see clearly that when the farmer in Texas sold the local shipper, and he in turn sold the futures in New York, those contracts went directly into the hands of the Russian mills. As a rule there are other stages in the transfer of the cotton from the South to the European mill. A southern merchant will sell to an importer in Liverpool who will later sell a buying broker acting for a Manchester mill. Here we will find several hedging transactions on account of the same hundred bales. The southern merchant buys the cotton and sells hedges against it; then he offers it to Liverpool and the importer buys it and sells hedges against it, more than likely using the New York market for the purpose. Meantime, the southern man has covered his contracts. Later on the importer resells to the buying broker who takes the cotton for the mill because it is exactly its quality, but in turn sells contracts against it because the mill has not yet sold the goods. Later on, when the mill does sell the goods, the buying broker covers his hedge in turn. Meantime, the merchant bought the goods because he thought the quality attractive, and he has sold cotton futures against them. Finally, the goods move to the retailer for distribution, the merchant covers his contracts, and at last the hedging of that particular hundred bales is over. But, meantime, how many future contracts have been bought and sold against the same hundred bales? Many persons, sometimes sincerely and sometimes because it is a good catchword, shout about the number of times the crop is dealt in on the exchanges. I am reminded of an answer given one of these people, who happened to be a Congressman, by a member of the Exchange. "Mr. X, if I sell you a horse, and you sell it to Mr. Brown, and he sells it to Mr. Smith, and he sells it to Mr. Green, and he again to Mr. Jones, and he in turn to Mr. Thompson and he back to me, that horse has been sold seven times—but do you mean to say that seven horses have been bought and sold?"

World's Clearing House.—Exactly the same remark could be made about our hundred bales. It was traded in many times in the course of its journey from the South to the Manchester mill, but did that increase the number of bales? Indeed, the exchanges would not be performing their proper function if their transactions did not always exceed many times the actual number of bales in any one crop. There is an example of the same thing constantly present in every city of size in the United States. The total amount of bank clearings is published in dollars. Did any one ever trouble to compare the amount with the total deposits in any one city?

Speculation at the Outbreak of War, 1914.—There has been much said from time to time as to the volume of speculation in the New York market as compared to trade business, or, in other words, to hedging. It has been said that the speculative buying and selling far exceeded any trade business. It is certainly true that the speculative business is well advertised. There is something exciting and pleasant in reading about the "enormous buying for the account of X, the new Cotton King." There is not much that is more humdrum than to read about the hedging of mills or merchants. Yet the latter far exceeds the former. In the summer of 1914 it was possible to get a complete cross section of the New York market and find out just how the outstanding contracts were to be figured. That summer business was not brisk, the shadow of impending calamity hung over the world, but a certain amount of speculative buying had been attracted by a drought in Texas which threatened the growing crop. Most of this buying was concentrated in the office of a firm known to be of highly speculative character but supposed to be of good financial standing.

In the last week of July the political situation in Europe became most threatening, and all markets were affected by a hasty liquidation, due to the desire to get investments liquid in cash instead of in stocks and bonds, and the fear that commodities on hand might prove costly property.

Such was the situation in all markets except foodstuffs, but in the cotton market the situation was still further complicated by a fear that exports would be shut off. While business had been inactive that summer, still, simply in the ordinary routine of trade, a good many thousand bales had been sold forward to mills in Central Europe and Russia. Now it began to look as though none of these shipments could be made, while in the meantime future contracts had been bought by the merchants in New York against the sales. If these merchants could not make the shipments and the market was declining, as it was at the moment doing with some velocity, then these merchants would be "long" the futures and would incur a severe and entirely unexpected loss. They had bought the contracts in good faith and with no intention of speculating, and now through no fault of their own were confronted with a most serious situation. They were long of cotton at a time when there seemed to be no bottom to the market. Such was the position on the morning of July 31 when it was ascertained that the strain in the securities market was so great the banks had refused to permit trading. On the other hand, Liverpool was better than due, and private cables asserted the diplomatic situation was improved. The cotton market opened at ten and was immediately met with an avalanche of selling orders, prices breaking sharply, until finally, the failure of the speculative firm already mentioned, S. H. P. Pell and Co., was announced, to be immediately followed by another suspension. The Board of Managers held a hasty meeting, and as it was known other failures were impending, and as each failure made the situation worse, the Board suspended future dealings. While the Board was in session another notice of suspension was received at the office of the Exchange, but was not posted as trading was stopped. Later, by hard work that particular firm was saved.

It had been supposed that trading could be resumed on Tuesday, August 4, 1914, but by that time the war had begun. Great Britain, France, Belgium and Russia were arrayed against the Central Empires, and all ordinary business with Europe was disrupted. Under such circumstances it was impossible to reopen the Exchange without the probability of a flood of selling. In the next week heavy rains fell all over Texas and it was seen that the situation had been further complicated by the fact that the trade had an enormous cotton crop to handle with half the demand removed. Meantime, all the mass of contracts left open on July 31 was "in the air," and the first task was to arrange to finance these commitments. The Board of Managers had appointed a committee, Mr. E. M. Weld, Mr. Henry Schaeffer and Mr. R. C. Cairns to seek ways and means to reopen business safely.

Cotton Trading Corporation.—For our purpose we need not follow all the details of the two months' work, but finally the following plan was perfected. A "Cotton Trading Corporation" was formed, and it was announced that, subject to the approval of the committee, this Corporation would buy all "distressed cotton" in the New York market at nine cents a pound, a price far above the unofficial quotations, and would resell that cotton to members of the Exchange in accordance with their ability at a price of 7½ cents, a price also above the informal market. The loss would be paid by the Corporation, either in cash or by notes. The cash would be obtained from a syndicate of banks in New York, organized for the purpose by Mr. Frew of the Corn Exchange Bank who realized that to get business restored to normal in the cotton trade was of first importance to the general situation. The syndicate agreed to advance $1,500,000 to the Corporation. The individual members of the Exchange pledged their personal credit for the security of the banks and of the holders of the Corporation notes issued to take care of the balance of the loss. It was agreed that a very heavy tax should be placed upon the members trading on the Exchange until the whole amount of both notes and bank loan was paid. The tax was collected on every transaction made and was most onerous. The total amount thus paid by the New York Cotton Exchange was $3,220,000. This was gradually paid off and the Corporation dissolved. The sum does not include the Pell failure losses, nor the losses on contracts refused by the Committee and repudiated by the customer. The War crisis showed up the entire trade as by a white light, and the number of honorable merchants was a credit to the American cotton trade. However, the black sheep also appeared, and each black sheep cost a great deal of money.

Searching Investigation.—The Committee made a most rigid examination of all outstanding contracts in New York. It had no intention of presenting any one with seven dollars and a half a bale. In other words, where a merchant had sold cotton to a mill and had bought futures against the sale and the mill was still able and willing to live up to the contract, that merchant had to finance his own futures. This was entirely just since he was collecting the full amount from the mill. On the other hand, where a merchant had sold to Russia, he could not now deliver, and was therefore "long" the contracts, his was obviously "distressed cotton." Where the mill had bought contracts or cotton against the sale of goods and could not deliver the goods, then they were long, and their contracts or those of the merchant who had sold them spots and bought the futures against the sale, were "distressed cotton." The contracts of the mill, which had sold and was delivering the goods and yet refused to take care of its future contracts because by so refusing they could make an extra profit of $10 to $15 per bale, were taken care of because the brokers held the contracts as "distressed" thanks to the dishonorable conduct of the mill. The same applied to the black sheep among the merchants.

Percentages.—So much for a very brief history of three trying months in the summer and fall of 1914. It has been necessary to give this brief sketch of the situation that we can understand how it was an exact and accurate survey of all the contracts outstanding in the New York future market came to be made. It had been impossible to make such a survey accurately heretofore because the firms objected that they had no right to disclose customers' accounts. Under the pressure of the 1914 necessity all accounts were not only disclosed but carefully investigated. The remaining unliquidated "Pell contracts" were regarded as speculative. Even so, the committee ascertained that about 85 per cent of the contracts outstanding on July 31, 1914, were for "trade account," hedges in one of the numerous ways in which hedges are created. The balance 15 per cent were speculative contracts. In 1918 a similar investigation was undertaken at the instance of the Bureau of Markets, as it had been alleged a large speculative short interest existed after the Armistice. The result was about the same and the short interest was not found.

Markets South.—During the three months the Exchanges were closed the greatest confusion existed throughout the South. The trade had been so accustomed through nearly fifty years of uninterrupted future trading to the ordinary use of the contract markets, that they had failed to realize what the closing of the Exchanges would mean. One of the greatest troubles was the impossibility of finding out what was the price of cotton. Quotations varied a cent a pound within a few hundred miles, depending entirely upon whether the local merchants had an order in hand for some cotton. No one dared buy very much cotton without an actual order, because there was no way of hedging.

Despite the decline in prices there were many who feared still lower levels, and without the ordinary trade insurance merchants were afraid to buy ahead. The present generation learned to their bitter satisfaction that trade insurance and a world market daily open to all through the organized Exchanges, are necessities. Since 1914 we have heard much about "regulating" future trading, and we have had attempts in that direction, but we have heard much less about abolishing futures. It is probable the next generation will again have to be taught the same lesson, for that is the experience ever since the Exchanges began operations in the seventies. Nevertheless, as an object lesson, 1914 was probably worth all it cost the cotton trade.

CHAPTER XXVIII

HEDGING AS TRADE INSURANCE

Hedging as Trade Insurance.—In the last chapter we took a broad view of hedging, so that we might grasp the real perspective of an intricate subject. It was necessary that we should speak in general terms, because we shall have so much to say about details, that there is danger the broad underlying principles may be overlooked. Hedging is the means of carrying on trade insurance in such manner as to make a world-wide market for instantaneous buying and selling. It is the trade insurance part of hedging that interests the individual merchant in the trade, and it is this side of the question which must now claim our attention. All the many details must be carefully studied because they are important in marketing, and also because a part of the legislation on the future trading has been harmful, due to a misunderstanding of these details.

Theoretical Protection.—In theory the merchant should obtain perfect protection from his hedges. That is to say, if a merchant sells a mill in July cotton for delivery in October, he should be able to figure out his exact profit and by the purchase of future contracts as a hedge, obtain that profit irrespective of market fluctuations in the interim. If he sells the cotton and the price advances before he buys the bales for shipment, then the profit on his future hedge should take care of the loss on his spot sale. On the other hand, if the market declines, it should theoretically make no difference, because the profit on his spot sale should take care of the loss on his future hedge. The same thing should be true if he buys cotton South and sells futures against it until such time as he can resell the spots. If the market advances, he should be able to sell the spots for sufficient additional profit to take care of the loss on the hedge; and vice versa, if the market declines, the profit on the hedge should take care of the loss on the spots. In any event, he should secure the original profit on which he figured in entering upon the transaction. Of course were the business all as simple as this, no occupation could be more restful than that of shipping cotton from the South to the mills of the world.

Premiums.—As a matter of fact, the business is not simple, it is complicated in the extreme; it is not restful, it is both interesting and lively in the extreme. Even now, while to make the initial explanation of hedging as simple as may be we are assuming that the protection afforded by futures is perfect, we must pause to mention the first complication. The mills want even running cotton both grade and staple, and the cotton coming into the southern markets is of every different grade and staple. Part of the function of the merchant is to assemble those bales, select them out into even running lots, and thus afford the mill what it wants. That takes time, which costs interest, it takes labor, which costs wages, and finally it takes both skill and experience, which have always commanded either salaries or profits. The natural result is that the even running lot commands a premium over the "run of the receipts," and, as the future contract being a basis middling contract is practically the "run of the receipts," the even running lot commands a premium over the future contract. This fact a certain class of spinners has never been able to grasp, as we shall see a little later, when we come to consider hedging by the mills.

Theoretical Examples.—We shall now look over some examples of hedging to see how the business is actually done. It is needful to repeat again that these illustrations are simply to show the method. They are not practical, because no account is taken of a change in the relation between spots and futures. It is better also to state that the premiums given for grades and staples are purposely not the present market premiums. It has seemed advisable to stay away from the market prices, so that readers will not become mixed by an attempt to make the figures in these examples match up with any current prices.

Sale Forward.—We will suppose that a southern merchant, Smith and Co., are approached during July to sell a mill spot cotton for delivery in the month of November. They do not know what the price of cotton may be in November. In the interim there may be a disastrous drought, there may be an early frost and the crop may be very short. Or, on the contrary, the season may be highly propitious and the crop very large. Smith is not particularly interested, the firm has bought a December contract ''against'' the sale and with this contract they sit tight and wait. As the stock of cotton is published by grades in the Exchange circular, it is possible for Smith to know exactly what cotton he would receive if he took delivery. It sometimes happens that a firm will take delivery on a hedge and then ship the cotton received against their spot sale. In seasons when the stock in New York happens to be almost even running, this can be done successfully. As a rule, however, it is not done because the merchant would receive several grades on his contract and could not ship the mill without buying a lot more cotton and separating it out. As this is precisely what he has to do in the South, he usually buys in his spots there and, when he has done so, sells out his future hedge in New York.

Hedging Forward Sale.—During the month of July a mill called the Poco Manufacturing Company has an opportunity to sell goods, which will require the yarn made from a hundred bales of strict middling one inch and a sixteenth cotton. They ask their spinners' broker to get them a contract for that cotton to be shipped from the South during the month of November. The spinners' broker, A. and Co., wire several correspondents in the South for offers, including Smith and Co. The latter know that it will cost them a cent a pound to "land" that cotton, so to cover freight and charges will cost a 100 points. Also they would like to make a half cent a pound, which is 50 points. They know that they can usually buy that character of cotton in their territory "even" with New York futures. They decide to select December as their hedge month, and adding the 100 points and the 50 points together, instruct A. and Co. to offer the mill a hundred bales strict middling inch and a sixteenth cotton at 150 premium on December, the price to be definitely fixed when the hedge is bought through a designated future house in New York. Formerly, the southern merchant would offer the cotton himself at a fixed price, taking his judgment of the future market as a basis. For example, if he thought he could buy December within an hour or so at about 13.50, he would offer the cotton to the mill "immediate acceptance" at 15 cents landed. The fluctuations have been so rapid and so wide in recent years that practically all selling is now done, price to be fixed when the hedge is bought.

We will assume that the mill takes the cotton, whereupon A and Co. instruct X and Co. in New York to buy the future and report to Smith. The latter receive a telegram from X reading: "Bought 100 December 13.50 yours on instructions A and Co. against sale Poco Manufacturing Company." On receipt of this message Smith knows the sale has been made, and in due course he and A exchange "sale notes" to confirm the transaction. Smith makes some such entry as the following in his order book:

> July 15. Sold Poco Manufacturing Co. through A and Co. 100 bales Strict Midd. 1 1/16 Nov. shipment @ 15 cents landed. Shippers Order/Notify John Jones, Treas. 162 Milk St. Boston. Ship to Turners Siding, Mass. Bost. & Me. d'ly. Reimbursement sight draft on Jones ladings attached. *Cover.* Bought 100 Dec. N. Y. @ 13.50 with X and Co.

The summer goes on, the weather is good, the crop turns out to be large and the price declines. During October Smith and Co. are buying cotton freely as it comes from the gins, and they get their 100 bales of strict middling at 12.80. As soon as the cotton is bought, they wire to X and Co. in New York to sell out the December hedge. They get a reply that the contract has been sold at 12.90. Smith and Co. have the bales compressed, marked and shipped in accordance with their instructions, drawing on the mill treasurer at 15 cents. They balance the order in their book by the entry:

> Nov. 1. Bought 100 bales at 12.80. Shipped marked "HERO."
> *Cover.* Sold 100 December N. Y. @ 12.90 through X and Co.

Summary.—Let us see where Smith and Co. came out on the transaction.

July 15.	Sold 100 bales Strict Midd. 1 1/16		15.00
	Cost to land		1.00
	NET SELLING PRICE		14.00
Nov. 1.	Bought 100 Bales Strict Midd. 11/16		12.80
	NET PROFIT SPOTS		1.20
July 15.	Bought hedge 100 Dec. N. Y.	13.50	
Nov. 1.	Sold hedge Dec. N. Y.	12.90	
	Loss on Futures		*.60*
	NET PROFIT		.60

Remarks.—Smith expected a profit of 50 points or $2.50 per bale and he has a profit of 60 points or $3 per bale. It is not always possible to get your future contracts bought or sold at the exact price you have been counting upon, and in this instance instead of selling out his December at 12.80 as he had figured, Smith was so fortunate as to get 12.90, thus making the additional ten points. You will note that the market declined between July and November and that without his hedge, Smith might have made a large additional profit. That is the thought that will occur to the outsider and never occur to the cotton man. He knows the market will move and he also knows from bitter experience that it is quite as likely to move against him as in his favor. He is not at all interested in the general price, but he is interested in the profit he has expected to make, namely the 50 points. This he has secured in any event, if his hedge affords perfect insurance as we are assuming that it does.

Long Hedges.—Between July 15 and November 1 Smith has been short 100 bales of spots and long 100 bales of futures. In other words *he* has had no interest in the market. But his brokers, X and Co., have been long the 100 December for him in the future market. This is what is called a "long hedge" and as you will see it said that there is a large "long hedge interest" in the market, it is as well to know just what is meant by the term.

Buying Cotton and Selling Hedges.—We have supposed that Smith and Co. went out and bought 100 bales of strict middling without any more trouble than the simple statement would imply. As a matter of fact this would almost never happen. Smith would surely have to buy 200 bales to get a 100 of the exact grade and staple he wished for his order, and he might have to buy many hundred bales. In that case he will have cotton on hand, which he must sell to some other spinner. He may be able to sell his surplus cotton immediately, but it is more likely that he must carry part of the stock for some time. He does not wish to take the risk of the market, so he will sell futures against that cotton. Or, later in the month at a time when the spinners are not interested, he comes across some more strict middling, which he can buy at the same relative price. He knows that there is always a lull in the demand at about this time in the season, when the mills have secured a portion of their supplies and are waiting for new spring and summer business before buying further. He will buy the strict middling, hold it until there is a renewed demand and then resell to the mill, being meantime protected by his future "cover." Let us see how that sort of proposition works out.

Sale of Futures.—Smith and Co. find that they have bought 100 bales of strict middling, which cost them 12.50 and they instruct X and Co. to sell 100 March, and soon have the reply "sold 100 March 12.40." Now they can deliver that cotton on their March sale by shipping the bales to New York and having X attend to the details of delivery. In that case they will eventually be paid 12.40 cents for the cotton, basis middling, "with additions or deductions" for other grades as provided by law. This is done quite frequently, more especially in seasons when the market is high and yet there is a long time of dullness, when the mills, unwilling or unable to pay the price brought about by a short crop, are holding aloof. It may be business is so poor that the diminished supply will answer, it may be that the mills are eventually forced to pay a higher figure than they wished. In either event the merchant still has his 100 bales when March approaches, and to stop the interest, storage and other charges, he delivers on his future sale. On the other hand, it is more often the case that before March comes, Smith and Co. have an inquiry for strict middling cotton and are able to sell the spots for the profit expected, buying in the future hedge. Such a transaction would work out like this:

Nov. 15.	Bought 100 bales strict middling			12.50
Jan. 15.	Sold same landed		13.10	
	To land	1.00		
	To carry	.20—	1.20	
	NET SELLING PRICE		11.90	11.90
	Loss on Spots			*.60*

Nov. 15.	Sold as hedge 100 March N. Y.	12.40
Jan 15.	Bot. in hedge 100 March N. Y.	11.40
	PROFIT ON FUTURES	1.00

Profit on Future Hedge	1.00
Loss on Spots	*.60*
NET PROFIT	.40

Remarks.—Here the advantage of hedging is obvious. Messrs. Smith and Co. had bought 100 bales of cotton, which they could not sell at once. They carried that cotton from November till January and in the meantime the market declined 100 points or $5 a bale. Despite that fact they were able to sell the cotton in January at a net profit to themselves of 40 points, or $2 per bale, simply because the profit on their hedge had protected them against the loss on the spots due to the fall in price.

They had meant to make their usual profit of 50 points, but there was a loss of 10 points between the purchase price of the spots and the sale price of the futures, due to the fact that the market was declining when the order reached New York. It resulted that the spots were bought at 12.50 and the futures sold at 12.40, so that there was a difference of ten points in between the spots and futures, whereas they were expected to be "even." It will also be noticed that 20 points was added to the 100 landing cost in order to take care of carrying charge.

Short Hedges.—This transaction, so far as the future market goes is the reverse of the other, and the contract is short instead of long. These are known as "short hedges," which expression is also frequently seen in market letters and newspaper articles.

CHAPTER XXIX

HEDGING AND BASIS

Basis.—We allowed Messrs. Smith and Co. to have no trouble whatever in the relation between their spot cotton and their future contract hedges. In theory the future contract should move up and down with the spot cotton so that perfect protection is afforded by the hedge. In actual practice the relation between the basis middling future contract and the even running lot of spot cotton is constantly changing. This relation between future contracts and even running spot cotton is called "basis," a small word but one of the most important and troublesome in the vocabulary of the cotton merchant. If the spot lot sells at a higher price than the future contract, it is said to command a "premium" or to put the same thought in different language, it is said that the cotton sells at so many points "on" the future month being used as a hedge. On the contrary, if the spot cotton is selling at a lower price than the future contract it is said to be offered at a "discount," or to put it a little differently, it is said to be selling at so many points "off." When the spot cotton and the future contract are selling at the same price, then the spots are said to be "even" with the hedge month.

Illustration of Definitions.—Thus Smith and Co. would have said that they sold the strict middling to the Poco Manufacturing Company at "150 on December," meaning that they asked the spinner a premium on the price of December of 150 points. It makes no difference that this premium was made up of 50 points profit for Smith and 100 points to land. Suppose that Smith had been unable to land the cotton for less than 150 points, but that they wished to sell the bales in order to reduce their bank loan, and so offered the lot to the mill without any profit for themselves, simply at the 150 points it cost to land. They would still be offering and selling the cotton at "150 on December." Suppose that the cotton was offered to Smith and Co. in the South at 12 cents when December was selling at 12.50. Then the cotton would be said to be offered at "50 points off December." Finally we have seen that Smith and Co. were able to figure from past experience that they could buy the particular cotton they wanted at "even" with the December price.

Elements of Basis.—There are various elements which go to make up basis, an analysis of which will be helpful. In the first place there is the premium which even running spot cotton must carry above a basis middling contract, on which many different grades may be tendered. We have already discussed this element, which is really the foundation of basis. Next we have the cost of delivering. Cotton is almost invariably offered to the domestic mills "landed," the word including cost and freight. The insurance is sometimes carried by the mill while the cotton is in transit, because as they have paid the draft the "insurable interest" in the cotton is theirs. When the seller does the insuring, the cost is included in the price. In theory the cost to land, so far as basis is concerned, should be the amount additional to land from the South as compared to the cost to land from the point where the future market is located. As a matter of fact, the basis usually includes the whole cost, just as we noted that Smith and Co. added the cost of landing and even the cost of carrying to the amount "on" the future price. The profit of the merchant is added into the basis, and in that profit is included, consciously or not, the cost to him of doing business. So far we have discussed what might almost be called the purely mechanical elements of basis. There are others which it is less easy to put down in absolute figures. These are: manufacturing condtions, crop conditions, and market conditions, factors which are from their very nature constantly changing.

Basis and Manufacturing Conditions.—This factor partakes of two separate elements. First, we have the purely engineering part of manufacturing cotton into goods or yarns. Certain fine counts of yarns and certain classes of goods can only be made of cotton of certain specific high grades, and of cotton of certain length and strength of staple. Now the very fine count yarns and the very fine goods command a fancy price. We need not for our part consider the reasons, which in part are mixed up with the cost of the cotton so it is difficult to tell cause from effect. The fact remains that these mills do secure a high price for their product and can and do pay a high price for their raw material. This is naturally reflected in the premium of the high grades as compared to middling. Moreover, aside from the specialty mills, there is a difference in the spinning value of high grade cotton as compared to low grade. The amount of foreign matter increases as the grade is lowered and that foreign matter must be removed in the picker room and is so much waste. We shall see in another chapter that this waste can be calculated through a series of experiments, and has been so calculated both privately and by experts from the Department of Agriculture. Of course, the manufacturer expects to be recompensed for the waste by securing the cotton at a lower relative price. The same is true of lighter staple which will waste more in spinning than the harder varieties. For this reason, among others, the basis is higher for Valley and Texas cotton than for Gulf, and higher for Gulf than it is for the shorter varieties of Atlantic cotton. The spinning waste, both grade and staple, is a constant factor and is affected only by the cost of the extra labor involved, the rate of interest and other elements, which change but slowly.

Second, the manufacturer must consider the cotton goods market. When the demand for goods is brisk and business is good, the spinner can sell at full prices and he is not so sensitive to changes in basis. He can afford to pay a higher price. When business is poor, mills are running on part time, goods are difficult to move even at low margins, then the spinner must count the cost of his raw material very closely. He will resist any movement of the basis higher, and he will on the other hand try to force it lower. In the case of the specialties this may result in very wide fluctuations in basis, as may be seen by a comparison of the premiums paid for extra staple cotton in 1920 and in 1921. The table at the end of Chapter VII will show these fluctuations in a striking manner.

Basis and Crop Conditions.—We have seen in previous chapters that the grade of the crop may be seriously injured by bad weather conditions in the fall, when the cotton is open on the plant. There is always a certain amount of damage every year and every crop contains low grade cotton. Now, if the damage be abnormal you may be confronted with a mass of low grade bales and a scarcity of high grade bales, with the very natural result that the premium on the high grade cotton will rapidly advance. In figuring his basis in the summer the merchant will always add something to take care of this risk. In an ordinary year past experience has taught him just about what to expect in the line of damage and just about what proportion of good grade cotton his territory will normally furnish. It is the general rule that the basis will advance slowly over the season from October 15 until the following June, as the supply of better cotton diminishes. The exact date when the advance in basis begins, the rapidity with which it advances, and the extent to which it runs, are all matters varying with the crop and with manufacturing conditions, as well as with cotton market conditions. Observation and study and experience will enable the trained merchant to judge as to trade and market conditions. The weather factor is one he cannot judge and most of the so-called "basis risk" is centered here.

Basis and Market Conditions.—The change in basis is also affected by the conditions in the cotton market itself. Let us suppose business to be brisk, mills well engaged ahead and eager to buy cotton forward during the summer months. The merchant sells some cotton at liberal basis, is asked to sell more, raises his basis considerably and to his surprise has the offer accepted. The same thing happens again and is also happening to his neighbors. There is really more cotton above the grade of middling bought than will be easily produced except under the most favorable circumstances. The merchant gets back home, hears that his neighbors have been selling ahead in volume, gets alarmed and begins to buy in his cotton as fast as he can. It is not long before other merchants, seeing the basis advancing, begin to buy freely in their turn. Under such conditions, even if the weather is good and the grade is not lowered while the cotton is open on the plant, the basis is bound to advance because of the large amount of cotton sold forward above the grade of middling. The future market will advance in sympathy with the demand for spots to fill these forward sales, but the future market will advance more slowly. The crop as a whole is not so small, it is the supply of the better grades that is small. The basis then widens out rapidly and some of those who have sold ahead and bought futures find that their cotton costs them more than they had expected and that the protection afforded by the hedge is not perfect. In a year like 1906 or 1919, when there has been a large forward business done, and then we have a bad fall, the basis will advance with startling rapidity, for the supply of the better grades has been reduced at a time when they are in wide demand. Moreover, the supply of cotton available for delivery on future contracts is not reduced, it may even be increased by the storm. When the farmer is confronted with a crop like 1919–1920 with an *average* grade of low middling, he has a lot of low grade cotton to market. The merchant will buy as little as he can because he knows he must carry the load until the spinner is forced to take that character of cotton. He will lighten that load as far as he can by delivering on contract. That is to the advantage of the farmer as affording him another outlet, but it is going to widen the basis. A long controversy has been waged over this point, which we shall have to consider in our next chapter. Meantime we may note that market conditions affect basis, and that when crop conditions and market conditions come into play simultaneously, the basis will advance very far.

Basis and Staple.—Staple is a most important factor in the actual value of cotton, indeed it is more important than grade for the reason that the extra staples are a specialty, limited in both supply and market. On the other hand, staple is not so important in basis fluctuations as is grade. The reason is that extra staple cotton cannot under any circumstances be safely hedged with the ordinary basis middling future contract. Another glance at the table in Chapter VII will show this statement to be based upon experience. Of course, any refuge in a storm is better than none, and staple merchants caught in a tornado like that of 1920 will seek some shelter by selling futures against high priced staple stock. They may thus save a portion of their loss, but they do not hope to escape without any loss. The only real hedge for extra staple cotton is in the Egyptian Future market in Liverpool and even there it is difficult to make out a workable relation between the contract and extra staple American cotton. This additional market risk in handling extra staples is one reason for the high price they command and also for the terrific losses incurred by producers in years like 1920.

Staple Clause.—There is one point where the staple does touch the usual run of future contracts. Prior to 1914 the old future contract in New York had no specific staple clause. It was charged that a few thousand bales of very short fluffy cotton from parts of the Atlantic would collect in the New York stock, and that the fear of the tender of this cotton kept buyers away from the near position, so that the basis was thus artificially widened. There was merit in the contention and one of the constructive features of the United States Cotton Futures Act was the staple clause prohibiting the delivery of cotton less than ⅞ inch staple.

Grade and Basis.—Grade is a most important factor in basis, first because it enters into every forward sale and is consequently a part of every spot transaction hedged with futures, and second because the efforts to steady the basis have all been directed to the matter of grade. The grade differences on and off middling for other grades delivered upon future contracts have been the storm center of most of the basis controversy for twenty odd years.

Buying Basis.—When the merchant is figuring on forward business, he must consider at what approximate figure he can buy the cotton in the South. We have seen that Smith and Co. figured that they could buy the cotton they were selling at the same price as December. This is called a *"Buying Basis"* the term being frequently used in the trade to denote the price relative to futures at which the cotton is to be bought in the South. The merchant makes up his *"limits"* every morning and sends them out to all the agents and buyers as their buying basis for the day. The limits are made up on the merchant's judgment of conditions, such as the character of the cotton moving, the probable supply of various grades, the orders on hand, the probable orders to be received, and other factors. He naturally wishes to get his cotton as cheaply as he can, but often the limits given out show a loss on forward sales, simply because conditions are such that he has had to raise his buying basis to get the needed cotton. The idea of sending out a basis is that the purchases can all be made on a hedging level with the future month selected. Thus, it is customary to instruct the buyer to purchase a certain grade at "Fifty on December New York." Of course, it is not always possible to do this, but where a flat price, as for example 20 cents, is named for the cotton, the buyer or agent will hastily adjust this price to the December price and decide whether or not it is close enough to warrant the purchase. Owing to the fact that many persons who do not comprehend the business can hear buyers and merchants discussing the basis as compared to Decembers or some other future month they obtain the entirely false impression that the future market alone controls the price. Nothing could be more erroneous. We shall consider this matter later, but meantime suffice it to remark that if futures alone controlled the price, the problem would be much simpler. The price control lies neither with futures or spots because neither is a separate market, but each is part of the same market.

Selling Basis.—It is obvious that the price at which the merchant offers the cotton to the mill in the East cannot be the same price at which he buys it. He must add his profit (including an allowance for his running expenses) and he must also add the cost of landing the cotton at the mill or at the port in Europe. For example, Smith and Co. had a buying basis of "even" with December for the cotton they sold the Poco Manufacturing Company, but they offered the cotton "landed" at 150 on December, of which 50 points was for their profit and the balance for the freight and other shipping expenses. This higher figure would be called the *"Selling Basis."* It is usually perfectly possible to tell from the context which basis is under discussion. For example, when you hear a merchant say: "In my part of the state the basis is now about 40 on December for strict middling 1 1/16," you know very well he means the buying basis. Also, if you hear a merchant just back from New England say "I found the basis about 200 on," you know he means the selling basis. In case the context does not make the meaning clear it is just as well to find out before discussing the price very far.

Basis Risk.—After this analysis of basis, it has probably occurred to the reader that a certain amount of risk attaches to forward sales hedged with futures. This is perfectly true. The merchant may sell strict middling on a "buying basis" of 40 on December, making the price landed at the mill 200 on December, with Decembers bought at 20 cents. His selling price is then 22 cents and, if the general market price stood still, he must buy the cotton at 20.40. If the market advances so that when he comes to buy the cotton in the South December is 25 cents and he can still buy the spots at 25.40, or 40 on December, he is perfectly satisfied. His long hedge took care of the five-cent advance in price and he is not at all injured thereby. On the other hand, if his 40 points is disturbed, then he is hurt even if the price has declined. Suppose December is only 16 cents, when he comes to ship and he must buy his strict middling at 16.40. Then further suppose that a storm has lowered the grade without lowering the quantity, so that strict middling cannot be bought for less than 100 on December, and he is therefore paying 17 cents for his cotton. He has lost all his profit and 60 points or $3 per bale besides.

Illustration of Loss on Basis.—Just for the sake of comparison let us take the transaction of Smith and Co. which we have already studied. Their buying basis was "even" with December, and in our previous illustration we allowed them to obtain their cotton at the proper basis without difficulty. Let us suppose, however, that they have encountered one of those years when the grade falls off without diminishing the supply. The basis has in consequence advanced rapidly and Smith and Co. find that they can only buy their strict middling at 80 on December. Their forward sale works out like this:

July 15.	Sold 100 bales strict middling		15.00
Oct. 30.	Bought 100 bales Strict Midd	15.80	
	Cost to land	1.00	16.80
	Net Loss on Spots		*1.80*
July 15.	Bought as hedge 100 December		13.50
Oct. 30.	Sold out hedge 100 December		15.00
	NET PROFIT ON FUTURES		1.50

Recapitulation.

Loss on Spots	*1.80*
Profit on Futures	1.50
Net Loss	*.30*

In other words, the advance in the basis cost Smith and Co. all their anticipated profit and 30 points or a $1.50 per bale absolute loss besides. It will be seen that down to forty points Smith has enough profit to keep him in the clear. If he had to pay 40 on instead of even for the cotton, he would still have a small profit. If he had to pay fifty on, then he would do the business without profit and without loss. If he has paid anything above fifty on December he begins to lose money at once. In this case the future market did go up and did perform its proper function of protecting Smith against a loss arising from a general advance in prices. The basis, however, ran up so much faster that the protection was not complete. Of the 180 points apparent loss, the hedge took care of 150, and the basis cost him the balance.

Actual Experiences with Basis.—So much for a theoretical example of a basis loss, but one or two actual experiences may be of interest. When I was in Arkansas years ago, the firm for whom I was working sold a lot of cotton for shipment in October at what they considered a most excellent basis. The cotton sold was good and strict middling and the staple was equal to a type, which was almost full inch and an eighth. This was in the days before the weevil when such length was considered above the average but by no means exceptional staple. Cotton of that character was regularly sold ahead and hedged with futures. I do not now recall the exact basis on which the cotton was sold, but, we will assume that we expected to make a dollar a bale, and that in order to do so our buying basis was 50 on December. We had an excellent crop and the supply of high grade cotton seemed inexhaustible so that we were buying far below our basis, realizing anywhere from a dollar and a half to two dollars and a half on all the cotton we bought against those forward sales. Meantime business was improving and the export competition in Texas forced an advance in the basis for our character of cotton. We began to get inquiries from the east and outright bids for more of the same character of cotton at still higher premiums. These orders we were filling as easily as we had those accepted in the summer. One day the senior partner came out of the cotton room and told us that he had sold several thousand bales of this cotton for January shipment, the basis on March futures in New York being the highest he had ever known. He stated that if we continued to buy that cotton as rapidly and as easily as had been the case all the fall, it would not be many weeks before we had the sale covered and the profit secured. About five days later we had a cold wave with frost followed by several days' severe rain. This was not unnatural that late in the fall, but it finished our profits. No more cotton above middling was for sale in the country, and it shortly became evident we had our work cut out for us to get in the cotton we had sold for January shipment. The first thing under such circumstances is to put your basis right up, ignoring the profit entirely, on the old trade theory "Never mind the cheese, only let us out of the trap." We did get some cotton this way, and then we began paying prices which showed us a loss. Soon we had all our men out after this cotton and they were making little or no progress so I was sent up to try the Memphis market. The factors had some of the cotton, but every one there was short also, and you could not buy it readily. Next I was sent to New Orleans, and there I managed to scrape together 500 bales or more at a net loss of over $5 per bale. Meantime the basis kept advancing and there was doubt whether we could fill the order at all, when one of the firm located the crop of the Arkansas State Farm which had not yet been sold. They bought all the crop and managed to squeeze out enough cotton to fill up that order. Then we figured out the result. On the advance of basis on the last cotton sold, we had lost all the profits made on the earlier sales and something besides, so that, so far as that particular mill was concerned, we had worked from September till January for something less than nothing.

Poor Quality Year.—The incident above happened in a year of good grade and good weather, and occurred simply because our senior partner used bad judgment in overselling a quality at a time when he should have known the supply was pretty certain to diminish. On the other hand, losses are often most severe in seasons when bad weather sets in early and sales made during the summer are not yet covered. A friend of ours in 1906 came back from a New England trip early in September and told us how much cotton he had sold forward and at what basis. The price seemed most attractive, but we thought the quantity very large and told him so, also calling his attention to the fact that most of his competitors had sold just as heavily as he. However, he was confident and wrote back from the South that the quality of the early receipts was excellent, the quantity would be large, and the basis was already easy. Ten days later the Mobile Hurricane swept across the belt, there was no more high grade cotton, and the scramble to cover forward sales had begun. Our friend did not fail, but it took all his capital to pay his losses and he never recovered his former position. Of course he was overtrading and that accounted for a part of the trouble, but the real cause of his downfall was the advance in the basis due to a storm which he could not anticipate. The basis risk is a serious matter in shipping cotton.

Profit on Basis.—It must not be supposed that no one ever made a profit out of basis. The normal course of basis is to advance from the level at which the seasons open. There are exceptions to this rule, of course, but it is obvious why it should be the rule. As the season progresses the grade of the cotton picked is sure to be lower and the supply of high grade cotton to diminish. When prices were not so high and interest was not such an item, it used to be possible to buy good middling in the fall, put it under bill of lading for the East, sell futures against it, and make a profit on the basis even while the cotton was in transit. Later in the season a profit can be made by the purchase of low grade cotton at a wide discount, the sale of futures against the bales, and the reversal of the operation when the mills must come to the use of the lower grades because of the scarcity of their raw material.

Illustration.—Let us go back once more to Smith and Co. You will remember that they were fortunate enough to obtain a hundred bales of strict middling in November at a comparatively low basis and that they sold futures against the cotton in New York. We assumed the basis remained unchanged, but it is much more likely to have advanced, in which case their operation would work out like this:

Nov. 15.	Bought 100 bales strict middling			12.50
Jan. 15.	Sold same landed		13.10	
	Cost to land	1.00		
	Cost to carry	.20	1.20	
	NET SELLING PRICE		11.90	11.90
	Loss on Spots			*.60*

Nov. 15.	Sold as hedge 100 March N. Y.	12.50
Jan. 15.	Bought hedge 100 March N. Y.	11.10
	PROFIT ON FUTURES	1.40
	Loss on Spots	*.60*
	NET PROFIT	.80

As it cost Smith 100 points to land and 20 points to carry, and as they expected to make a profit of 50 points, their regular selling basis would have been 170 on March. As a matter of fact the basis had improved, so that they received 200 on March for their cotton, selling the cotton at 13.10 landed and buying in their futures at 11.10. The difference between this 200 points and 170 points is 30 points and that is the additional profit they made by the advance in basis.

CHAPTER XXX

BASIS

Agitation on Basis.—It can be seen from the illustrations in the previous chapter that the risk of loss on basis is very great. While it is equally true that the chance of large profits on basis also exists, it is only natural that merchants should look at the losses rather than at the profits. It seems to them the one could be prevented by some sort of adjustment of the future contract, and only too frequently the other seems to them the result of their own ability rather than the result of basis alone. Of course, it is true that ability to correctly read the basis situation and to take advantage of opportunities offered is essential to securing basis profits. The fact remains, however, that it is only natural to believe that basis losses are not due to lack of ability or to reckless trading, but are due exclusively to some defects in the system of future trading, which can and should be corrected. There has been a constant agitation in the cotton trade to so change the provisions of the future contracts that basis shall remain approximately the same despite market or weather or any other factors. It is the dream of the average merchant that in some manner the contract can be made to rise and fall automatically with the rise and fall of the premium on even running spot cotton. Of course, it is quite possible to draw a future contract which shall provide for the delivery of one grade alone, say for strict middling. In that case it is to be presumed the contract for strict middling would always remain at the same level as even running strict middling spots, because, as a matter of fact, that would be the contract. It has been realized, however, that such a contract would be impossible as a hedge for the very good reason that no one would sell such a contract ahead unless some sort of protection was provided. The merchant will now sell strict middling forward, because, however much he may think the protection is inadequate, still he can secure some measure of protection under the present system. He can always buy the future contract he requires as a hedge, because as that contract is now drawn it takes care of so many different grades of cotton that there is always considerable trading going on. Some merchant, somewhere, will have cotton to hedge, and the sale of his hedge will afford our friend the contract he requires to buy for his protection. If the contract were limited to one grade, say strict middling alone, then only merchants desirous of hedging strict middling alone would dare sell such a contract, with the result that the hedge would not be available for our friend. Besides, while speculation makes up a very small actual percentage of the trading done in the future markets, it is the function of speculation to take up the slack, to be willing to provide either buyers or sellers at a moment when contracts from the trade are lacking. No speculator would trade in a single grade contract. During one period of agitation the New York Exchange offered a committee of spinners a separate trading ring and a single grade contract for the purpose of experiment. The offer was not taken up because it was known such a trial would result in failure.

Aside from this extreme, however, many suggestions have been made as to provisions in the future contract to cure the basis evil. These suggestions have to do either with the fixing of grade differences or with the grades to be delivered on future contracts.

Grade Differences.—The whole matter of grade differences has become so highly controversial that it is a difficult matter to handle without accusation of prejudice one way or the other. The dream of many merchants is to have the differences advanced or reduced so rapidly that the value of the future contract will automatically alter with the value of specific grades, so that the basis changes will be minimized. To date that dream is far from fulfilment, if indeed it can ever be realized.

Original Method of Fixing Grade Differences.—The original manner in which grade differences were fixed grew up naturally. When the trading was largely confined to merchants residing in the same place as the future market, it was simple to have a committee meet every day and quote all the grades on the list, these quotations to be the means of ascertaining the differences to prevail for deliveries on future contracts. This was the original method of fixing the differences adopted both in New York and New Orleans. The New Orleans Exchange retained the method after New York had dropped it, and to distinguish between the two this was called ''commercial differences.'' It is supposed that the differences are daily fixed on the actual value of each grade as established in the market. The New Orleans people have always been attached to the scheme and still continue it.

Difficulties in Fixing Grade Differences.—The trouble is that the daily value of each grade is not so easy to establish as would appear at first glance. If all the various grades were traded in on any given day, then it would be simple for the committee to ascertain the average price paid for each grade that day, and so fix the differences between grades with reasonable accuracy. Thus, if the average price paid for good middling is 15.50, for strict middling 15 cents and for middling 14.50, then it is quite obvious that the differences should be made 100 on for good middling, and 50 on for strict middling. If the next day there are still transactions in all the grades and good middling is bringing 15.75, as against 15 cents for strict middling and 14.50 for middling, then it is also clear that good middling should be advanced to a premium of 125 on, while the strict middling difference is left alone. Also it is to be presumed that the future contract will not alter in its relation to even running good middling, because the advance in the price of that grade has been reflected in the additional premium. If only the daily revision system had kindly consented to function in this manner, all the tiresome and confusing controversy over the relative value of grades might have been avoided.

Actual Workings.—The difficulty is that all grades are not traded in at any one point every business day. Of course it would be absurd to say that such a thing has never happened, for it is probable it does happen in some market a number of days during every year. It does not happen in the same market many times in a year and it does not happen in the same market many consecutive days in succession. But the committee must quote all grades every day, and they naturally resort to the method of taking the quotations which they can obtain, and then "calculating" the value of the other grades in which no trading has occurred. They cannot help themselves, they must get the quotations and this is the only way in which they can obtain them. But the moment this sort of calculation begins the committee steps outside the realm of fact and enters upon that of judgment. This at once introduces the possibility of error, which is common to all human judgment. It matters not whether the error be an honest mistake or not, the trouble will arise just the same. Suppose that the committee believes that low middling is worth 75 off middling on some particular revision date, and the trade at large think the difference should be 100 off. The judgment of the trade, that is, the judgment of the open market, will eventually prevail, the contract will take up the slack of the differences and the basis will widen some 20 to 25 points accordingly. Then the committee is largely criticized and a number of merchants who relied upon the differences to protect their basis feel that they have been injured.

Single Markets.—Moreover, the committee is basing its judgment upon the situation in one market while conditions elsewhere may be entirely otherwise. Of course, in such a case the differences made by the committee cannot long be maintained. So soon as they are recognized to be above the general market level, cotton begins to move to that market for delivery. The moment that happens, and merchants realize the stock of these certain grades will be increased, the price of those grades comes down to the level over the belt as a whole. Then the committee, according to the rules, must recognize this change and alter its differences accordingly. Whereupon the merchants having cotton in transit for delivery find themselves confronted with a loss. Dissatisfaction results, many harsh things are said about the self interest of the committee, when, as a matter of fact, no member of the committee has any personal interest in the matter.

Public Opinion.—The committee is faced with still more insidious pressure. There comes a year of wet fall and low grades and wild scrambling for the comparatively limited amount of high-grade cotton. For weeks the market is devoted almost exclusively to sales of high-grade cotton, the only low grades being taken are such bales as the factors can force upon unwilling buyers in the process of making "the high end sell the low." The committee must exercise its judgment as to the differences on the low grades, while in the meantime the high-grade premium constantly advances. As most merchants have forward sales and are in more or less trouble with the basis, great agitation exists as to the premiums and discounts. Every one wishes the contract "held up" in its relation to high-grade cotton, and no one is in the least concerned about the low grades, a large stock of which the unfortunate producer now has to market. The force of such unanimous opinion as to the value of cotton must be felt to be appreciated. The committee hear nothing except what a high price must be paid for good cotton, what a low price must be accepted for poor cotton, and how important it is something be done to "protect the hedge." The committee would be more than human if it did not accept the opinion for the fact and widen both the premiums and discounts. The result is not always a happy one. The new and wider differences are discussed through the length of the belt with the result that the excitement is increased and shortly the dose must be repeated. Meantime, as no committee can possibly keep up with that kind of panic-stricken market, the basis is not appreciably affected by the changes, and in the end the merchant has his losses still and the farmer has seen his cotton marked down to a mere pittance. It is true he likes the idea, but that does not alter the damage, which, as we shall see, is no small matter.

Wider Discounts and Cotton Held.—Later on we come to the end of the year and turn the corner into January. All the small amount of high-grade cotton is out of the country by that time, and we find a large stock of low grades advertised far and wide as of small value but which are the property of every one in the trade from the farmer to the merchant. The latter has been so busy getting out of his first basis trouble with high grades that he has paid scant attention to the hedges sold against the low-grade stock he was forced to buy in order to fill his high-grade orders. Now he discovers that the process of marking down the lower cotton has gone so far that he has still another basis loss. The contract has been "strengthened" not enough to prevent a loss on basis sales, but quite enough to present him with a loss on the cotton he has been carrying hedged with futures.

Manipulation of Differences.—This can be done more easily than might be supposed. Let us assume a fairly quiet market and a merchant with some strict middling to sell. He cannot immediately sell the cotton for shipment and he would like to move it and get himself financially eased up. He decides to deliver on contract. He employs half a dozen brokers to run around the market and bid for strict middling in small lots. If possible they actually buy some cotton at the higher price and there are many hints of a large order for strict middling being quietly filled. The committee meets and as in duty bound takes cognizance of these sales and marks up the price of strict middling. The merchant delivers out his stock at 50 cents or possibly $1 a bale higher than he could otherwise have obtained. Take a reverse case, the merchant has a lot of low middling he would like to buy. Low middling has already been marked down, but he knows that there is so much in stock that he will obtain a good proportion of his needs by taking delivery on the last of the current month. He waits until the day before and then causes several brokers to run around and offer small lots of low middling at lower prices, making some sales. Once more the committee marks the price down and he takes up the cotton at a lower figure.

Shipments for Delivery.—Another evil arising from constantly changing the differences is that no merchant can ever tell in advance just what he can get for cotton delivered on contract, for the differences may be changed several times while the cotton is in transit. He is then loath to deliver if it can be avoided. This is an evil because it makes it easier to run corners and squeezes and thereby costs the average merchant money unnecessarily. Another trouble is that merchants hesitate to take up cotton on contract because they fear that when they come to redeliver that cotton they may be assessed a loss by widening of differences while they held the cotton. This tends to unduly depress the current month and that always leads to complaint from the South.

Fixed Differences.—This is another misleading term, for it was applied to the system adopted by the New York Cotton Exchange in the late eighties or early nineties, which was not a fixed difference system at all. The members of the New York Exchange had realized the difficulties with the daily revisions and sought to cure them. They thought that if the differences were arranged once a year, or rather twice a year, September and November, then merchants could be relied upon to adjust their transactions to these differences and the constant turmoil of daily changes would be avoided. Unfortunately, they did not make a real fixed difference. They appointed a committee to meet in September at the very opening of the season and again in November when the grade was presumably established. The committee was to exercise its best judgment and fix differences which would hold until the following September. On this committee were appointed members of the Exchange from the South and from New England, in order that all sections might have a hearing. This method was an improvement on the old, although it afterwards came to be bitterly attacked. The advantages were that cotton could be shipped for delivery without danger of loss, that cotton could be taken up and carried without having its value arbitrarily reduced, that the daily struggle over grades not quotable was avoided, and that the committee was not constantly being harassed for changes of one sort and another. In other words, a distinct element of stability had been introduced.

On the other hand, the underlying evil of human judgment remained. It is true that the committee had to exercise its judgment but once a year, for the September revision, as a rule, did not amount to much. Nevertheless, the element of human error remained, and was strong enough to wreck the system a few years later.

1906 Revision.—All went well until the fall of 1906. In that year business was booming and mills were well sold ahead at remunerative prices, so that they were eager buyers of forward cotton during the summer months. As the crop prospect was unexcelled and the basis was good, merchants were equally eager to sell forward. The English mills were also well engaged and good buyers, so that at the outset of the season an extraordinary amount of basis cotton had been sold. It is questionable whether the actual amount sold was not larger than any ordinary season would produce, that is to say, whether the southern merchants had not oversold the probable production of grades above middling. Be that as it may, the Mobile Hurricane swept through the middle of the belt in early October and ruined the grade of the crop. A persistent succession of severe rain storms followed and the damage to the quality exceeded anything known prior to that date. As was to be expected under the circumstances, the premium on the high grades began to advance at once, while the discount on the low grades widened more slowly, since it was not at first realized what an oversupply of cotton below middling had been produced. When the Revision Committee met in New York early in November, the higher grades were duly marked up, but no one realized what was about to happen with the lower grades. There was some suggestion low middling be set at 100 off, but there were few adherents to that idea and there was opposition from the South. Finally the committee settled on 50 off for low middling, and over the intervening fifty points a contest of crimination and recrimination has waged ever since. It may be admitted the committee made an egregious blunder because in any event, even if the hundred points was not accepted, fifty points was too little. They made a bad error in judgment, but it should be said in justice to them that the demand for one hundred points discount was much stronger after the event than it was before. Still, a little more reflection might have shown them a wider discount was advisable under all the circumstances. Let us admit the error, and let us even go further and state, as the most severe critics did state, that the mistake was made deliberately, which it was not, still the fact that the New York difference on low middling was 50 points and not a 100 had nothing to do with causing the trouble. Nothing could have prevented a wide basis and a severe loss to merchants with forward sales, for you cannot sell what the Lord does not allow to be produced, and escape without loss through any human agency. We may call attention to the fall of 1919, when despite terrific discounts on low grades, and despite the fact the danger was early realized so that the volume of sales was comparatively small, the basis was wider than ever known.

Results of 1906.—You cannot expect men who have suffered severely to be altogether just or altogether wise in their judgment upon the cause of their misfortunes. Least of all can you expect them to willingly admit that any of the blame attaches to them. So much was said about the New York Revision that many people came seriously to believe that the entire trouble was due to the fact that New York did not fix its differences every day. The agitation continued and grew louder and stronger so that, in 1914, the belief in "commercial differences," so-called, was widespread and there was strong pressure to have them put into the proposed United States Cotton Futures Act. The producer even was convinced by all the clamor that in some mysterious manner he would be benefited if only the price of low grades was daily marked down.

Average Differences.—The result of all the talk was the difference provision in the Act which left it to the Secretary of Agriculture to designate spot markets. It was known he would designate New Orleans, whose difference method would thus remain unchanged, and would not designate New York, which would have to adopt the average differences of the designated markets, which were eventually named as follows: Galveston, Houston, Dallas, Little Rock, Memphis, Montgomery, Augusta, Savannah, Norfolk, and New Orleans. This method of fixing the differences may be called the "average system."

Advantages Claimed.—So far as the New York Cotton Exchange alone is concerned, the method has proved a distinct advantage for the reason that no responsibility of the differences attaches to any committee or officer of the Exchange, and all criticism on a delicate subject is shifted to other shoulders. So far as the trade at large is concerned many advantages were claimed for the system, and there appeared ample reason for the claims. The scheme was ingeniously contrived by those in charge of the legislation to obtain the supposed benefits of a daily revision and at the same time to reduce the obvious disadvantages of such a system. No one market was taken as a standard, but the quotations of ten markets scattered over the belt were to be averaged. It could certainly be claimed with reason that the resulting differences should fairly represent the general southern value of the various grades of cotton. Moreover, any possibility of misconduct on the part of a single committee was eliminated, for the differences were made not by one but by ten committees. In the same way the chance of errors in judgment was supposedly reduced. Most of the trade, including myself, were satisfied in 1914 that in all probability the basis question was pretty well solved, since the value of the contract should change with the value of different grades in the South. As a matter of fact we were to be disappointed, for we never had such fluctuations in basis, nor did any one ever see such premiums as were general in the years from 1916 to 1921.

Disadvantages; Quotations.—One of the difficulties with the average system has been that the quotations furnished by some of the ten markets have been very unsatisfactory. On the same day there have been variations of as much as five dollars a bale in the quotations given for the same grade in two markets within a hundred and fifty miles of each other. Of course, when you get such variations either one market or the other is not quoting the price for that cotton correctly. It may be that the wrong quotation comes from only one market, in which case the averages are only slightly altered. On the other hand, when several markets happen to be out of line on one particular day the averages are very much affected.

These poor quotations are caused in various ways. Often they are simply the result of sheer carelessness, the committee being hurried by their own business and anxious to get away, or perhaps it is difficult to get a quorum, and absent members are consulted in their offices, or even on the golf links, and agree to suggested figures without due consideration. Sometimes there is widespread discussion of the widening basis and the prospect of a scarcity of high grades, and the quotations represent a fear of what is to happen and an anxious desire to prevent the anticipated, rather than a statement of actual conditions as they are on that particular day. Sometimes the value of some grade or grades is affected by the fact that a large stock of those cottons exists at some particular market. The committee are unconsciously influenced by the desirability of moving that cotton out. They are sometimes brought to believe that the cotton is more valuable than is actually the case, but just as often they are brought to believe the grades in question are of very little value because they cannot be sold. Another influence is the result of the belief in the efficacy of the printed word, or, to be more accurate, the printed figures. There are many men who feel that somehow the quotation must not only represent the market at a given moment as it is, but also the market as it should be. It is amazing how far this belief will carry people. They seem to feel that if you will only assert a thing long enough it must come to pass, just because it is so ardently desired and just because it is so publicly proclaimed. The *reductio ad absurdum* of this point of view was illustrated well in 1917, when some markets persisted for weeks after the February first panic in quoting middling at 20 cents, although they knew and every one else knew that the market value was far less. The agitation to have cotton return to that figure may have been justified, the decline may have been unnecessary; those questions do not need to be argued. But a quotation is not supposed to be either prediction or propaganda. Quotations are supposed simply to be the unaltered record of established facts.

The Bureau of Markets held an investigation in 1918 and discovered the basis situation to be more unsatisfactory than at any previous time. In part this was due to War conditions and to unnecessarily severe specifications as to the character of cotton used in Government contracts. The Bureau also discovered the unsatisfactory quotations and a meeting was called in Memphis in the spring of 1919, at which there were present delegates from all the designated markets in the South. A long discussion of the necessity of careful and accurate quotations and suggestions as to methods of making up the figures resulted in some improvement in the character of the quotations furnished New York for averages. The basis, however, was worse than ever the following two seasons.

Fundamental Evil in Fixing Differences.—There is an underlying difficulty in all three methods of fixing differences from which it is impossible to escape. Every time the quotations are altered, the value of some one's property is arbitrarily changed. You cannot escape from that fact if the differences are to be changed by any ordinary agency. The committee or committees engaged in making up the quotations are also engaged in putting a value upon property and in doing so without any public hearing. It is true that you cannot hold court every day and listen to long arguments pro and con on every difference revision, because to do so would hopelessly disrupt the orderly conduct of business. On the other hand, so long as you have committees of any sort issuing dicta as to the value of cotton belonging to other people, so long are you bound to have dissatisfaction and accusations of carelessness, bad judgment, and selfish motives. This fact in itself injures the quality of the revision. No man and no body of men is willing to go against public opinion, even when they are satisfied opinion is mistaken. It is much easier to go with the crowd than against it, and many committees lack the exceptional man who can go his own gait irrespective of the pressure from the majority. The result is that when opinion is strong that certain grades should sell at certain discounts or premiums in order to protect the basis, a committee is prone to report that figure as the quotation in spite of the fact that sales are actually made at some other figure. They are so anxious to do the right thing that they do wrong and their quotations thus lead to much trouble.

Spinning Differences.—There is only one way in which you can avoid the arbitrary fixing of values, and that is to have a method of differences which is more or less automatic. You cannot accomplish that by changing the differences constantly, but it is possible it might be accomplished by never changing them. As we shall see at the end of this chapter it is possible to ascertain with reasonable accuracy just what the waste is in spinning every grade. That waste represents the actual loss to the mill in the weight of each bale spun. It has been proposed to take that actual loss, reduce it to percentages as compared to middling, and then reduce those percentages again to points as compared with a price to be selected for middling. Thus, if we should find that good middling cotton wasted 5 per cent less than middling, and we had selected 20 cents as the middling price, then good middling would be at a premium of 5 per cent on middling or 1 cent. Thus the difference " on " for good middling would be 100 points. Similarly, if low middling wasted 5 per cent more than middling and middling was 20 cents, low middling would be 100 " off." Having ascertained the proper differences in this manner, they would be promulgated and never changed until either the price went so far out of line that a fresh figure had to be selected, or some other factor altered the general situation. These matters could by law be left to the Bureau of Markets, which could hold tests and public hearings in the first place to establish the differences, and could also hold hearings to consider changes. There should be a provision that such changes could take effect only eleven months subsequent to their official promulgation to avoid such senseless confusion as was witnessed in 1919 when Congress saw fit to change the contract overnight.

It would be necessary to make some modifications in the absolute waste percentages to allow for the fact that all mills cannot use low-grade cotton even at value, since certain mills make specialties requiring the use of the higher grades. The premium on the high grades would probably have to be "weighted" to allow for this, and the discount of the low grades would probably have to be altered to balance. All these questions should be settled by some Governmental body like the Bureau of Markets, on whose fairness all could rely. The Bureau could hold public hearings, announce the results of their own tests in the mills, and after discussion decide upon and issue the differences.

Spinning Differences Revisions.—These fixed differences would be changed only when the underlying conditions changed and not at all to suit the grade of individual crops. Thus, if we have selected 20 cents as the price on which to figure our percentages and subsequently for a period of several crops the price ranged persistently around 10 cents, it might be advisable to alter the differences. Or, if the price thereafter for a number of years ranged persistently around 30 cents, the differences might be altered. The fluctuations of one crop should be entirely disregarded for the reason that the price of the contract and the changes in the basis together would correct temporary variations. It is only when the change appears so far fixed as to cause a strained position of the basis to be permanent that alterations in the differences should be considered. The other cause for changes would be such a wide alteration in wages that the labor cost of cleaning grades became a factor. That would occur but seldom.

Spinning Differences and Mr. Neville.—This idea of permanent fixed differences was a thought of Mr. George Neville, who was President of the New York Cotton Exchange in 1910 and 1911. Mr. Neville was a man of wonderful breadth of vision and a thorough and conscientious student of all cotton affairs. He was a southerner by birth and had served a thorough schooling in that end of the business. He was at the time a partner in one of the largest American firms doing an international business, with branches and agencies all over the world. Mr. Neville was recognized in the trade as an all-around cotton man of ability and vision, whose opinion on any cotton matter was well worth serious consideration. He was also a man of unquestioned integrity, remarkable mental capacity and a most delightful and fascinating personality. It was a severe blow for the entire cotton trade that such a natural leader should have died just when the most important legislation was under consideration. Mr. Neville was experimenting with the spinning values of cotton for several years prior to his death. He took the ground that, while the trade was not yet ready for the experiment, sooner or later spinning differences would have to be tried out on the theory that the constant alteration of differences by committees would never solve the problem.

Advantages and Disadvantages.—The great advantage of spinning differences is that the value of each grade, when delivered on a future contract, is fixed in relation to middling and cannot be altered. This throws the basis open entirely to the judgment of the merchant who no longer must needs take a guess at the opinion of a committee or committees in regard to the value of different grades. This does not mean that the basis will never alter. On the contrary, with spinning differences the attempt to solve the problem by artificially checking fluctuations in basis is abandoned. The basis will be traded in constantly, the value of each grade as compared to the basis middling contract being altered by the judgment of the trade in regard to weather, supply, and market factors. If we had an abnormal supply of low middling, for example, so that while the contract remained at the same relative value with low middling, it would be profitable to deliver that grade, then the price of the contract would fall, the basis would widen until the adjustment had been made, or until the trade believed it had been made. The latter thought is most important, because it is more than likely that in an open market for basis the extreme discounts and premiums would be avoided. It is the unanimous opinion of the trade that the open trading in futures prevents the extreme of high prices in case of a crop calamity, and the extreme of low prices in case of oversupply. With spinning differences the constant interference with basis by means of committee quotations would be discontinued, the market would be left to the judgment of individual merchants, as in fact it is at present. Did the wide differences of 1919 prevent basis troubles? The basis never was so great and the risk never was so heavy. The truth is that the mere widening of premiums and discounts by committees increases the difficulty of a bad situation by constantly increasing the alarm.

It will be said that the disadvantage is that the discount of futures under even running spot cotton in low-grade years will be large. That is true, although in view of some recent experiences it may be questioned if it would be wider than under the present method. It will be said, it has been said a tiresome number of times, that such a discount injures the producer. Why should this be true? He is interested in the actual return in dollars and cents, not in blackboard quotations nor in the basis risk of the merchants to whom he sells. Certainly the discounts on low grades as recently promulgated have been utterly ruinous to the farmer, as we shall see shortly. Why, then, should he not be helped rather than injured by an attempt to restore some value to half his crop?

Opinion of the Trade.—It should be said in conclusion that the majority of the trade do not believe in spinning differences and still cling to the hope that basis risk may be reduced by constantly altering grade differences. As long as this hope persists the average system is less harmful than any other method, but we can at least discuss spinning differences, with the hope that some day the method will receive a serious trial.

Low Grades Deliverable.—The other method of changing the future contract is to reduce the number of grades allowed to be delivered upon that contract. The theory that the low grades delivered on contract depressed the value of futures in relation to even running spot cotton has long been held in the South. This idea finally found expression in the "Low Middling Clause" written into the United States Cotton Futures Act by the Smith Amendment adopted in March, 1919. Let us hasten to remark that Senator Smith and Representative Lever spent much time and thought over the cotton problem and were anxious to do the right thing by the entire trade. One cannot read the reports of the hearings on the various future bills before their committees without being impressed by the fairness and impartiality shown by the chairmen. Nevertheless, the Low Middling Amendment was a mistake, for it did not aid the basis and it injured the South by still further lowering the value of low-grade cotton. The organized Exchanges are not guiltless in this respect, for they should have appeared before the Senate and House Committees and argued the case for the low grades.

Comparative Values of Low Grades.—This brings us to the most serious part of all the agitation and legislation of the past fifteen years, and that is the persistent marking down of low-grade cotton. When the 1906 excitement was at its height the theory was advanced that low-grade cotton was used to depress the price of contracts in New York, and that this brought down the price of cotton in the South. The underlying fallacy of this theory is the idea that there are two separate cotton markets, one for spots and one for futures, and that the price of cotton South is controlled by the price of contracts in New York. Of course, the theory is incorrect. There is only one cotton market, and spots and futures move together within that market. No one can say which controls the other, although pages have been written on the subject. The fact is that as they are parts of the same market they move together. We shall have more to say on this matter when we consider the way in which "limits" are made up. Moreover, if the contract declines because of the preponderance of certain classes of cotton at the moment in stock at the future trading points, so far as even running middling is concerned the slack is taken up in a widening of the basis. The merchant may be injured by misjudging basis, but the farmer is not touched.

The theory became very popular, nevertheless, and has persisted until recently, when signs of a reaction began to appear. A regular campaign of education in the small intrinsic worth of low-grade cotton was carried on, and the value of such cotton in comparison with middling steadily dropped. The following table will show what was accomplished along these lines from 1906 to 1920:

New York Future Delivery Differences[1]

Grade	1903	1906	1907	1913	1919	1920
Gd. Mid..	44 on	76 on	75 on	65 on	153 on	183 on
St. Mid...	22 "	38 "	50 "	32 "	85 "	98 "
MID'L'NG	Basis	Basis	Basis	Basis	Basis	Basis
St. L. Mid.	14 off	14 off	30 off	50 off	188 off	218 off
Low Mid.	38 "	50 off	100 "	125 "	480 "	488 "
St. Gd. Or.	72 "	90 "	150 "	200 "	*778 "	*720 "
Gd. Ord..	100 "	125 "	200 "	300 "	*1023 "	*923 "
Gd. M. T.	Even	Even	Even	Even	182 "	123 "
St. M. T..	6 off	6 off	20 off	20 off	289 "	218 "
Mid. Tinge	12 "	12 "	30 "	40 "	432 "	385 "
Mid. St'n'd	50 "	90 "	120 "	125 "	*696 "	*630 "

Result for the Farmer.—The table above will show the marked success of the opponents of low-grade cotton in reducing the comparative value of the bales during the seventeen years from 1903 to 1920. The sincerity of the belief that this was to the advantage of the farmer need not be questioned. There are always partisans in every movement whose zeal is entirely due to the popularity of the cause, and who care nothing whatever as to its intrinsic merit. It is true that such demagogues have been active in the hue and cry about low-grade cotton, but the sincerity of the real leaders both in the South and in Congress need not be questioned. The point is, did they really accomplish good for the farmer or did they not? This is a most serious question for the cotton raiser, confronted as he is with the weevil, is in no need of additional handicaps. There are two questions to be settled: first, did the marking down of the low grades cause such a marking up of the high grades as more than offset the discounts; and, second, what is the average percentage of each character of cotton in the crop?

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[1] The Government Standards were used after 1914. Prior to that date New York Cotton Exchange Standards were used. Grades marked with an asterisk (*) were excluded from delivery by the Amendment of March 4, 1919.

A glance at the table will answer the first question. The advance in the premiums for grades above middling has by no means kept pace with the increase in the discounts on grades below middling. For example, in 1903 the premium on good middling was 44 points, in 1906, 76 points, and in 1920, 183 points; while the discount on low middling was 38 points in 1903, 50 points in 1906, and 488 points in 1920. The discount on low middling had widened 305 points, or over $15 per bale more than the premium on good middling.

Percentage of Grades in Crops.—The second question, namely, whether the farmer has normally more high-grade cotton to sell than he has low grades is a question impossible to answer mathematically. All we can do is to state that in the opinion of the cotton trade, held through the hundred years of its existence, the farmer has certainly no more high-grade cotton and frequently less high-grade cotton for sale than he has low. For the very word "Middling" indicates that such cotton is of an average grade. In normal years then, with as much high-grade cotton as low, the farmer has lost $15 a bale on half his crop since 1903. In abnormal years the loss is almost incalculable, and since the weevil abnormal years in grade are almost monotonous. "Shepperson's" *Cotton Facts,* December, 1921, Edition, gives the average grade for the past five crops as follows: 1920-1921, barely middling; 1919-1920, strict low middling; 1918-1919, barely middling; 1917-1918, middling; 1916-1917 and 1915-1916, middling to strict middling. Out of these five crops in only two could the farmer possibly have benefited by the change towards wider premiums and discounts noted above.

Comparison of Two Low Grade Years.—A striking illustration of just what has followed in dollars and cents from the remarkable widening of low-grade discounts may be seen from a comparative table of 1913 and 1920 prices. The low grades were wider in 1919, but the crop that year was so notoriously poor in quality that a comparison with 1920 seems fairer. The discounts had come back a bit by the fall of 1920 and prices had ceased to be affected by the after-war boom. Besides, in both 1920 and 1913 we had falling trade and poor business. Of course, there was no comparison between the panic of 1920 and the conditions of 1913, but it is very difficult to get an absolutely exact comparison between any two years:

COMPARATIVE PRICES 1913 AND 1920 (*November*)[1]

Grade	1913		1920	
	Difference	Price, cents	Difference	Price, cents
Gd. Mid........	65 on	13.79	183 on	17.83
St. Mid.........	32 "	13.46	98 "	16.98
Mid.	Basis	13.14 Jan., 1914 N. Y. dely.	Basis	16.00 Jan., 1921 N. Y. dely.
Low Mid.......	125 off	11.89	488 off	11.12
St. Gd. Ord.....	200 "	11.14	720 "	8.80
Gd. Ord........	300 "	10.14	923 "	6.77

[1] The contract price taken is January New York, as that is an active delivery and the time would give ample opportunity for delivery on contract in New York, if so desired. The price selected for the January is what is regarded as a fair average for the trading during November. In 1913 January New York sold as high as 13.47 and as low as 12.78 during November and was at 13.14 on the tenth. In November, 1920, January New York sold as high as 20.15 on the third, as low as 14.53 on the 29th, and 16 cents was thought to be a fair average price.

From this table it will be seen that the price paid for middling, delivery on January contracts, in 1920 was about three cents a pound higher than in 1913. Yet for the grades of low middling, strict good ordinary, and good ordinary in 1920, the farmer received less money than in 1913. Indeed for good ordinary he received over three cents a pound, or more than $15 per bale less for his cotton than he did in 1913. Every one will recall that the low price for the lower grades held in the South in the fall of 1920 was one of the serious complications of a bad situation.

Bureau of Markets Grade Percentages.—The season of 1913 was a very poor one west of the River, where heavy and persistent rains fell steadily through the picking season. In the following spring hearings were held before Congress in regard to future legislation, the hearings from which later in the summer emerged the first United States Cotton Futures Act. The Chairman asked the Bureau of Markets to appear and furnish data on the grade of the crop in Arkansas, Texas, and Oklahoma. There was before the committee for discussion a low middling clause and the committee wished to know how much cotton would be excluded. The table furnished mentions the grades by name, except for low middling where the percentages were stated to be the amount of cotton excluded by the proposed legislation. In the table below the term low middling is used:

BUREAU OF MARKET GRADE PERCENTAGES, 1913

⅞-inch Staple or Above

State	Below Low Mid.	Below St. Gd. Ord.	Below Gd. Ord.	Crop
Arkansas....	26%	20%	19%	1,036,849
Oklahoma ...	21%	12%	9%	841,844
Texas	30%	22%	16%	3,771,271
Three States, Total Crop.......................				5,649,964

The percentages are also given for North Carolina, 19 per cent below low middling, and South Carolina 17 per cent below low middling. These two states were supposed to have had a high-grade crop in 1913. The testimony of merchants doing business in the western belt was that after January 1 no cotton grading middling or above was to be found west of the River. The whole discussion can be found in "Hearings of the Committee on Agriculture of the House of Representatives, Sixty-third Congress, Second Session." The table given above and the discussion will be found on pages 301-304, but all the testimony is worth reading.

In 1920 the discount on low middling is 363 points greater than in 1913, the discount on strict good ordinary is 520 points greater, and on good ordinary the discount is 623 points greater. In other words, the increase in the discount on the grades below middling will vary from $15 to $30 a bale. We will call the average $20, and we will assume that half the crop in those Western states, or 2,800,000 bales, was below middling. The actual amount of cotton below middling was much greater, but even on these moderate figures, had the 1920 discounts prevailed, the farmer would have had his loss increased by $56,000,000.

According to Shepperson the 1920 crop averaged barely middling, from which it results that at least half the crop was below the grade of middling. The 1920 crop, exclusive of linters, was 13,271,000 bales, Census Bureau figures. If we assume only 6,000,000 bales to have been below the grade of middling, a ridiculously low estimate, then at the average increase as compared to 1913 in discounts on low-grade cotton the additional loss imposed on the farmer in 1920 was $120,000,000. We have seen that in 1920 these lower grades not only sold that much lower comparatively speaking, but that the actual price received was less than in 1913. The increase in price of the basis middling contract of 3 cents a pound was no recompense for that loss. The South simply cannot stand such economic waste for long.

Spinning Value of Low Grades.—Leaving aside entirely the question of the supply, a question which need not concern us right here, let us see just what is the actual waste in spinning cotton of different grades. Mr. George Neville testified before the Committee on Agriculture of the House in 1910[2] that he had secured figures from an actual test made under his suggestion in a New England mill, and that he had also secured figures from a German mill. The results follow:

GRADES USED NEW YORK COTTON EXCHANGE STANDARDS
New England Mill Actual Service

	New England Mill Actual Service, per cent	German Figures, per cent
Good Middling waster from bales	9.65	10.00
Middling	11.60	12.00
Low Middling	14.85	16.00
Good Ordinary	16.73	24.00

The Bureau of Markets later tried similar tests and issued Bulletin 591, December 26, 1917, on the results. On page four of that bulletin are the following percentages of waste:

	Eastern Stock, per cent	Western Stock, per cent
Good Middling	8.75	9.35
Middling	10.66	11.47
Low Middling	12.23	13.37
Good Ordinary	15.64	16.89

The figures are the total waste, both visible and invisible. The details both at the pickers and cards are given in separate tables.

In the same bulletin are given the results of tests of the tensile strength of "22 yarns" made from different grades of upland cotton. On page 18 it is stated, "These tests show that 100 pounds of raw cotton, net weight of each of the different grades will produce the following pounds of yarn, not including the small loss which occurs in those processes subsequent to the cards: good middling, 90.95; middling, 88.93; low middling, 87.2, and good ordinary, 83.73 pounds." It must be remembered that there is an additional labor cost to be figured in addition to the waste, for in handling these lower grades the work is dusty and dirty. Moreover, many stoppages are required to pick up broken thread.

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[2] Hearings 2nd Session 61st Congress, Vol. II, page 317.

Comparison with Present Discounts.—A comparison of these spinning figures will show that whatever reasonable allowance is made for additional labor, the farmer has been receiving nothing like value for his low-grade cotton. It must be recalled that these waste percentages are from a 500-pound bale, while the discounts are from grade. In other words, you cannot take the differences between middling and good ordinary and compare them with the percentage of waste without the necessary adjustment. In any event, the 1920 discounts are seen to be ridiculous.

Correction of Evil.—It is probable the spinning differences would materially assist in correcting this injustice, but they are not likely for some time to come, so we must adopt a more practical solution. The Bureau of Markets, in the same bulletin, realizes the wrong, but simply proposes the same old remedy, namely, a further advance in premiums for high grades. In the first place, we have seen that in actual amount of cotton handled by the producer this remedy is of doubtful benefit. In the second place, we may be forced to very high prices by the weevil curtailing the yield, and we have seen that those prices are dangerous as inviting foreign competition. Consequently, it is best to avoid further increase in premiums. On the other hand, if we can raise the market value of the low grades somewhere near their spinning value, we shall have increased the return to the farmer by several hundred million dollars. It took nearly fifteen years of vilification and education to convince every one from the farmer himself to the labor union that there was something inherently bad and worthless about cotton below the grade of middling. We must now reverse the process and convince every one that the value is in that cotton to the spinner and that the farmer should receive more of that value than he now does. It will take time and effort and energy to undo the evil done in a mistaken desire to help the farmer. Still the effort is well worth while and must be undertaken because the present loss cannot be endured. There are already signs of a reversal in feeling South, and as the 1922 crop promises to be high in grade it is quite possible the discounts and premiums may come back still further towards normal. It must be impossible for mistaken public sentiment once again to force them so far out that on one-half his crop the farmer can receive less actual money at 16 cents than he used to receive at 13 cents.

Merchants and Basis Risk.—It will be objected that after a long and tiresome analysis of basis and efforts to regulate basis we have succeeded in suggesting a remedy for some of the farmers' troubles but none for the merchant. That is, of course, true, since, even were spinning differences to be adopted, our thought was that the basis risk would remain and would be modified only by the fact that open trading and lack of artificial regulation would tend to curtail the danger. However, it is impossible to trade in even running cotton based on futures and not have the two widen out and come together with the varying conditions of the market. The merchant must realize that the basis risk he will always have to encounter, and must adjust his plans accordingly.

After all, there is some good in almost all evil, and there is actual good in basis. The pride of the cotton trade is that in an open market, without fear or favor, it has so developed the business sagacity and initiative of the independent merchant that the crop is marketed at a moderate cost and without the assistance of any large corporation. No ''trust'' dominates the American cotton trade. Any man with sufficient ability can do his part in marketing, and the competition of keen merchants has held the middleman's profits down to a point where he is a benefit to the community without undue cost. The basis risk is largely responsible for this happy condition of affairs. Without basis, shipping cotton would become a mere mathematical formula worked out between each grade and the future contract, the incentive for individual initiative would be lost, the large firm would gradually absorb the smaller, and at last we should be in some such position as exists in other commodities, as, for example, tobacco.

CHAPTER XXXI

SELECTING THE MARKET AND PLACING THE HEDGE

Placing the Hedge.—There are three great future markets in which hedges may be placed, New York, New Orleans, and Liverpool, and the question frequently arises as to which market it is best to use. Of course, American houses will naturally make most use of the American markets, and English firms of the English market, and equally, of course, the proximity, or rather the telegraph service, will determine American houses whether to use New Orleans or New York. So far the question will appear simple, but, as a matter of fact, all firms make use of all three markets according as the opportunities for placing hedges appear most favorable to them. This leads us to a consideration of the relations between the different markets.

Normal Relations.—It is often said that the actual cost of taking up cotton in one market and delivering it in another should determine the question of the price in each. In other words, if it takes $5 a bale to buy cotton in New York, ship it to Liverpool and re-deliver, then the Liverpool market should always sell 100 American points, or 50 Liverpool points higher than New York in order to be on a "parity." Such a method of figuring is sometimes called a "shipping parity." Of course, under this method of calculation New York should sell higher than New Orleans, and Liverpool higher than New York. As a matter of fact the quotations are usually higher in the more distant markets, but they are by no means always at the shipping parity.

Variation in Contracts.—In the first place, the contract varies a little in each of the three, and the value of each contract is altered thereby. Of course, where the difference in the contract is fixed by the rules, the relation between the markets automatically takes up the difference in value, and the prices are not constantly changed thereby. On the other hand, where the variation in the terms has to do with the methods of grade differences, then the relations between the markets are constantly altered. Thus, if the average differences in New York give the value of low middling to-day as 200 off, and the commercial differences in New Orleans are the same, the value of the New York and New Orleans contract is the same. To-morrow the average difference is 250 off in New York, but the commercial difference in New Orleans is still 200 off. Then the relation between New York and New Orleans is immediately affected, and the markets proceed to take up the slack. The matter is still further complicated as between the American markets and Liverpool by the fact that the standards of grade used in the English market are not the same as in New York and New Orleans.

Variation in Shipping Costs New York and Liverpool.—As between New York and Liverpool, the cost of shipping cotton across the ocean is constantly changing and thus altering the normal relation between the two markets. The transatlantic freight rate is not fixed by a Government commission, but is made in the open market by the demand and supply of ocean tonnage. The larger lines may have an agreement as to rates, but any such agreement amounts to but little as against competition from the large number of ocean "tramps" which go into whatever trade promises the best returns.

Sterling Exchange.—Prior to 1914 the fluctuations in the value of the pound sterling were of some minor importance on the parity between New York and Liverpool, but since the war these fluctuations are perhaps the most important of all the influences on market relations. If the value of the pound is to change constantly, then the amount of cotton which can be bought for a pound sterling in Liverpool, as compared with the dollar price in New York, is going to change just as constantly. That variation cannot be taken up by an alteration in the amount of cotton to be delivered on a future contract, because, according to the terms of future contracts, the number of pounds of cotton deliverable on the contract is fixed. Thus the changes in the value of the pound sterling are taken up by the changes in the relative price of the Liverpool contract. If English money will not buy as much cotton as in normal times, then the price of the Liverpool contract is going to widen out over New York.

Minor Changes in Costs.—Minor fluctuations in the parity may be caused by changes in the cost of handling cotton in either market. For example, an increase in the wages of dock labor in Liverpool will add to the cost of shipping and so widen out the difference between the markets.

New York and New Orleans.—As between New York and New Orleans the costs of shipping are much less fluid because the freight rates are fixed and can only be altered by due notice in advance. Moreover, there is no exchange problem because both markets trade in dollar values. Aside from purely speculative considerations, the great influence on the parity between New York and New Orleans is a variation in the differences on and off middling for cotton deliverable upon contract.

Speculative Considerations; Forecasts.—It must be remembered that there is active, open trading in all three markets, and that as a result the prices do not usually wait upon actual events. The speculator and the merchant are both attempting to forecast the future by their transactions, and both in the aggregate of their dealings come very close to correctly judging probable happenings. A general expectation of an advance in freight rates as between New York and Liverpool, an expectation due possibly to the knowledge that ocean tonnage is being diverted to South American trade, such a thought will cause merchants to buy in Liverpool, so that the parity between the markets widens. When the anticipated advance in rates does take place, it is found to be ''discounted'' already in the price. No sooner is the parity between the markets well established on this new basis, than the trade begin to talk about the probability that tonnage will return to the transatlantic trade at the higher rates. Before long ships do reappear and a greater amount of tonnage is available for cotton. In the meantime the merchants are discussing whether or not this additional tonnage will not force a lowering of freight rates, and whether when buying it would not be better to put the orders in the New York market. Once more the parity begins to anticipate the lowered shipping costs, Liverpool comes down closer to New York, and when the reduction in freights does take place, it is in turn largely ''discounted.'' Open markets are influenced by past events in the sense that they have created present conditions. Thus the weather in the summer was unfavorable and made the short crop which is now the underlying factor in a strong market. But it is the future the merchant must watch, because it is the anticipation of future events and the probability of future conditions which most sway prices. In no department of trading is this more true than in the parity between markets.

Other Speculative Forces.—There are certain underlying conditions which much influence the point of view in the different markets, and so have a really marked effect upon the parity. Liverpool is a consuming market, that is, the cotton imported into Liverpool must be sold the Manchester spinner. The Liverpool merchant cannot do a profitable business unless Manchester is both busy and prosperous. Consequently, the Englishman is naturally prone to take an optimistic view as to the supply and a pessimistic view as to the probable demand. Conversely, the American markets are sellers' markets, that is to say, they have the cotton for sale, they are more prosperous on the whole when the South gets a good price, and they are consequently much more sensitive to the supply side of the problem than they are to the demand. Liverpool will be more strongly influenced by a rise in the price of silver as affecting Manchester's trade. New York will be more influenced by reports of a severe frost as cutting down the crop and thus making a higher price necessary if the farmer is to be prosperous. Thus, normally, in a short crop year you may expect to find New York advancing more rapidly than Liverpool where the merchants are loath to acknowledge Manchester must pay a higher price for her raw material. In fact, in active bull markets due to a shortage in supply, New York will get up very close to Liverpool. In the "Sully Year," 1903-1904, New York sold practically even with Liverpool, all consideration of the cost to ship having been forgotten in the excitement of the moment. Similarly, in the "First Scales Year," 1909-1910, under the same sort of conditions, New York advanced very close to Liverpool. In both instances the steady stream of short hedges being transferred from Liverpool to the higher American market eventually checked the rise, and then brought about a very sharp readjustment between the markets by a period of heavy liquidation on the American Exchanges.

Speculative Factors in New York and New Orleans.—Much the same sort of influence exists as between New York and New Orleans, although the reasons are different. The principal speculative factor here is the amount of cotton available for delivery on future contracts in one market or the other. Prior to 1914 the New Orleans grade differences regularly advanced so much on the high grades and widened so much on the low that practically no cotton could be delivered on New Orleans contracts in the spring of the year. There used to be a regular premium on all nearby deliveries in New Orleans after January, and no one would sell New Orleans and buy New York for that reason. As a result New Orleans frequently sold higher than New York in the spring months. Since 1914 and the average system of differences the matter has turned completely around. We have had a series of "squeezes" in New York and the near deliveries have often sold at outrageous premiums over the later months. There have been exceptions, however, when there was no market for cotton in volume unless it was delivered on contract. The knowledge of shipments for delivery, or the knowledge of a stock of a cotton in New York ready for delivery, or the anticipation of such events, will have a considerable influence on the New York-New Orleans parity.

Straddling.—In all organized markets, whether for commodities or securities, there has always been trading between one market and another. The terms used to denote such trading vary considerably with the different commodities. In the securities' markets such trading is called "arbitraging." In grain it is called "spreading," and the transactions themselves are called "spreads." In cotton the term "straddling" is used and the trades themselves are called "straddles," or sometimes "swaps," although this word is used more for trading between different deliveries in the same market. A straddle is a transaction open between markets, as, for example, a man who is long 1,000 March in Liverpool and short a 1,000 March in New York is said to have a "March straddle" between New York and Liverpool. It is also customary to speak of the "Liverpool-New York differences" instead of using the word parity, and care must be taken not to confuse this use of the word with the grade differences for delivery on contract. Straddling is a difficult and delicate operation requiring skill and practice, so that the rank and file look on it with suspicion. A friend of mine once voiced the popular feeling when he said that a man who was straddling New York and Liverpool "had one leg in New York and one in Liverpool, and so was astride the Atlantic ocean into which he usually fell."

Figuring Parities.—The parity between New York and Liverpool is figured in American points, taking two American to equal one English point, as explained in a preceding chapter. Thus, if March Liverpool is 12.20d. and March New York is 21.40, we take 21.40 from 24.40 and the Liverpool-New York difference is figured to be 300 points. We have seen that Liverpool closes at 4 P. M., which is 11 A. M. in New York. After the close in Liverpool, the New York market is open and fluctuates back and forth until it closes at 3. The closing "bid" prices are compared with the 11 A. M. bids and in this way it is figured how Liverpool should open in the morning to maintain the same parity with New York. Thus if March New York is 21.25 at 11 o'clock and the closing bid is 21.45, then Liverpool is "due" 20 American or 10 English points higher in the morning. Liverpool opens some four hours in advance of the New York market, and in its turn the English market will fluctuate back and forth prior to the beginning of trading in New York. Possibly at 2 P. M. Liverpool March is 12.50, when it was due only 12.30 to equal New York's close. It is then said that "Liverpool at 2 P. M. is 20 points (English) better than due." To equal such an advance the New York market should open at an advance of 40 (American) points over the closing price of the preceding day. Whether the New York market will do so or not depends a good deal upon the conditions. The arbitrage traders are always on the alert for changes in either market and their operations may prove of importance. For example, if the advance in Liverpool is due to an alteration of the exchange rate for sterling, or to higher freight, or to some other factor affecting the parity alone, then New York will probably not follow Liverpool. On the other hand, if the advance abroad is due to an improved demand from India or to some other factor likely to influence either the demand or supply of cotton throughout the world, then New York will follow the advance and may even exceed it.

Method of Figuring Relation Between New York and Liverpool.—It will be of interest to see just how the parity between the American and English markets is worked out. The table below was made up last June by our Liverpool house and sent to New York in connection with a letter discussing the relations between the markets. It seemed more interesting to adopt the table on the following page than to make up one on the present markets.

Actual Execution of Straddle Orders.—The actual execution of orders between the markets is no easy matter. It is difficult enough to buy one month and sell another in the same market at a specified difference, but to do so between New York and Liverpool with the added danger of cable delays is even more trying. Many brokers will refuse to be bound by an absolute limited difference, unless it be understood that the specified parity be more than apparent in the quotations. For example, take an order to buy March Liverpool at 350 over New York. The quotations show March New York at 21 cents and March Liverpool to be 12.25d., which is the exact 350 points. Yet if you try the straddle, you can easily find that having bought in Liverpool at 12.25, you can sell in New York at only 20.95, so that you have put through the order at 355 points and not 350, and are out 5 points, or $25 a contract. A leeway is usually granted on such orders, which read "about 350 points" instead of the exact amount.

Cost to ship Middling New York at 20 cents and deliver in Liverpool, basis Fully Middling, including 35/100 shipping charges, 25 cents freight, 1 per cent and 10 per cent insurance, 6 per cent tare, 28/100 Liverpool charges and 15/100 for Fully Middling.

```
         Exchange at $4.45
           20.00 Middling New York
             .35 New York charges
         -------
           20.35 F. O. B. steamer
             .25 freight
              .23 insurance, 1 per cent and 10 per cent
            1.23 tare
         -------
           22.08
             240 (240 pence to the pound sterling)
         -------
           88320
         4416
         -------
 445)529920(11.91 pence with Exchange at 4.45
     445       .28 Liverpool charges
     ---       .15 Fully Middling
      849   -----
      445   12.34
      ----
      4042
      4005          12.34 = 24.68
      ----                  20.00
       370                  -----
                             4.68
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Cost to take up and ship is then 468 points.
Actual difference day table was made up about 365 points.

Special Orders.—Competition for business is always keen and brokers will undertake orders they know to be a serious risk for the sake of obtaining or holding a good account. In that case, or in case a merchant wishes to put through a straddle for his own account, there are various methods adopted. One is to use a special kind of order, reading "Buy 500 March 21.05 quick," or "Buy five March at 21.05 Cancel." These "quick" or "cancel" orders are to be executed instantaneously or not at all. Thus, if a broker in New York receives such an order he steps at once to the ring and bids three times and then reports the results, thus "Bought one March 05, all could. March 07 bid," or "Sorry March 06 bid Nothing done." These orders are in constant use between New York and New Orleans and are frequently used between New York and Liverpool. The risk is greater in the latter instance because the cable service is not quite so rapid as the wire from New York to New Orleans. The idea of the order is to enable the broker in the one market to obtain cotton in the other so quickly that he can take advantage of some momentary flurry caused in his own market by a large order or a number of small orders arriving suddenly together. It may be imagined that with the necessity for such rapid service the cotton trade felt the war-time signs "Twenty mis. delay to Liverpool," very keenly.

Taking a View of the Market.—Another method which is essentially speculative is to "take a view" of the market and trade in one market ahead of the other. The brokers call it "lifting one end," a truly descriptive phrase. In times of excitement we have seen that New York will rush up close to Liverpool, and then, when the inevitable "reaction" comes, the New York price will decline more rapidly. Such times are excellent for putting through straddles. I recall that we had an order on such an occasion to sell Liverpool and buy New York at one of those teasing differences just about on the market and yet impossible to catch. One afternoon New York was very weak, and next morning the cables were some 15 points better than due. It seemed fairly certain New York would refuse to follow the English market, as there were still selling orders about. We sold several thousand bales in Liverpool before New York opened and took a chance that our view of the situation was correct. New York did open down, instead of up, and we bought the New York end without trouble, thus putting through the order at a better difference than our limit.

Merchants and Straddles.—The incident illustrates the way in which a merchant having hedges to place can benefit himself by careful selection of a market. On that same morning we had selling orders from people in the South hedging cotton. They could have saved over a dollar a bale beyond commissions by placing those sales in Liverpool before New York opened, and some days later, when the differences were again normal, buying in the Liverpool contracts and reselling New York. A merchant can in this manner reduce his basis risk by giving himself so much additional margin on which to trade. If his basis is to buy at 20 on in the South, then if he has a profit of 20 points by thus placing and then replacing his hedges, it is obvious his buying basis can go up to 40 points before he has a loss.

Opportunities.—Such opportunities come at some time every season, and the merchant should make a careful study of arbitrage business, with the idea that he will always have at least a part of his selling hedges in the highest market and a part of his buying hedges in the cheapest market. Some American firms have always been noted for this sort of trading. When, in the Sully Year, New York went so close to Liverpool, one southern firm for weeks put all its selling orders into New York and all its buying orders into Liverpool. They had a hard struggle, for they had miscalculated the strength of the bull market, but when the break did come they had so reduced their basis that they were underselling competitors the rest of the season. Of course, there is no royal road to success, and placing hedges in this manner requires thought, careful study, experience, and, above all, judgment. Still, it is a method of so handling hedges as to reduce the basis risk.

English Merchants.—The English firms have always made a regular practice of thus handling their future contracts. They will go even further, for they will move their open hedges back and forth across the ocean any number of times, always provided they can see a profit in so doing. The American firm dislikes to "trade with its hedges." In the sense of a speculation with them the feeling is correct, but the Englishman is never "open." He always has a cover, but he is opposed on principle to leaving that cover alone in one market, when he can reduce his basis by moving it back and forth. The reason for this English attitude in the first instance is to be found in the fact that, being in Liverpool, he has the quotations immediately available, whereas the American in the interior may have trouble getting them. Even so, the Texas exporters have come to adopt much of the English attitude and use New York, New Orleans or Liverpool unhesitatingly, as seems most advisable. The ordinary run of southern merchant might well give the matter some thought.

CHAPTER XXXII

SELECTION OF MONTH IN PLACING THE HEDGE

Inactive Deliveries.—After the merchant has selected the market in which to place his hedges, there arises the question of which delivery in that market shall be chosen as the "hedge month." This is just as important as the choice of the market, and indeed it may become even more important. Severe losses in basis are incurred frequently by placing long or short hedges in the wrong delivery. A primary rule is to avoid those deliveries which are either inactive or semi-active. Hedges should never be placed in February, April, June, or November, and the rule is almost as strict against hedging in August and September. The reason for not using these months is that trade in them is so inactive that it is expensive to get the hedges out and just as expensive to get the contracts back again.

Other Months.—The deliveries remaining are January, March, May, July, October, and December. Any one of these months is quite active enough to be considered for hedging purposes. Choice between them is further restricted by the fact that the more distant deliveries are inactive when first they are traded in, so that for a time they also must be avoided. For example, if you wish to place hedges in the fall of the year you will hardly use October because it will soon be the current delivery. You can use either December, January, or March, as you choose, and there is enough trading in May to make that delivery available also. July, however, is so distant that it is difficult to have orders executed properly, and so, except for some particular purpose, you would not put hedges in July.

Carrying Charges.—It costs money to carry cotton, for you must figure on paying interest, insurance, storage, and loss in weight. Theoretically, when you buy a March contract your cotton will be carried for you by some one until March arrives. That some one expects to be reimbursed for his expense and his time, so that the proper relation between months is for the distant to carry such premium over the near as will cover these costs. There are variations in the premium and it is seldom exactly accurate, but it should exist and it should be approximately the cost of carrying.

Cost of Carrying.—It is possible to figure out exactly what it costs to carry cotton from one delivery to the next, and it can thus be ascertained whether or not the premium between months is approximately correct. The premium will be somewhat less over a longer period of time, because a long rate insurance is less than a short rate and money can often be borrowed at lower interest for long periods. Thus the cost to carry six months will be somewhat less than the cost to carry one month multiplied by six. As an illustration the cost to carry one hundred bales of cotton for one month in store at New York is given below. These figures were made up on the basis of charges prevailing in November, 1921, with cotton at 18 cents per pound:

Storage one month 100 bales..................	50.00
Loss in weight 50 pounds @ 18 cents.........	9.00
Fire Insurance $9,000 @ 40/8.................	7.20
Interest $9,000 one month, 6 per cent per year..	45.00
	$112.20

This amounts to 22½ points, so that January should sell at 23 points above December to cover the cost of carrying. December will usually not be at quite this discount, because, unless the firm which is to carry the cotton has to borrow all its money to carry, there is a banker's profit in buying December and selling January at a discount of 23 points for the December. In other words, the firm will make 6 per cent interest on whatever amount they themselves contribute toward the cost of the hundred bales. If they borrow $4,500, then they will make 6 per cent on the balance, or the $4,500 of their own capital which they have invested in the transaction.

Abnormal Discount.—Discounts which are above the carrying charge are brought about for various reasons. A very large crop will produce a surplus of cotton, which comes to the contract markets to be carried, forcing the discounts on the near months wider than would normally be the case. The weight of such a surplus is felt more in times of business depression, so that if a large crop and a period of poor business coincide, the amount of cotton pressing forward for delivery on contract will be large and the discounts wide. The most recent examples are 1914 when a large crop coincided with the war panic, and 1920 when a crop of moderately large size was raised in a year of world-wide commercial crisis. As a rule after such a year discounts continue well into the next season, as the stock of cotton remains in warehouse and is slowly moved out to the spinner.

Undesirable Cotton.—We have seen that one of the proper functions of a future market is to receive and carry cotton not immediately desired by the spinner. At no time is this function more important than at a time of trade depression coupled with a surplus of cotton. The cotton is taken from the shoulders of the merchant or planter in the South, leaving him free to carry for its full value the cotton he can more readily sell to the spinner. Thus his cash resources are increased and the strain is relieved. A most serious objection to the present system of fixing grade differences is that the risk attendant upon constant revisions makes the merchant loath to take up cotton and carry it for a mere bankers' commission lest the small profit be entirely lost and more by a change in the value while he is carrying the cotton. The result is that, at the very time when it should be made as attractive as possible to take up and carry cotton, the discounts have to widen out abnormally before the merchant will assume the risk.

Tendency to Narrow Discounts.—Aside from the matter of grade revisions, however, the natural tendency is for an abnormal discount to come back more or less rapidly to the carrying charge. If it costs 23 points to carry from December to January and the discount on December widens out to 30 points, there will appear a demand for December. That buying power will depend somewhat upon the ease with which money to pay for the cotton can be obtained, but it is sure to increase if the discount widens out, and eventually it will restore the normal carrying charge.

Long Hedges and Current Deliveries.—As a matter of practical business it is foolish for the merchant, having sold spots ahead and desiring protection, to buy his hedges in October contracts at even with or above the price of December. He should stop and reflect carefully before he buys the near position above the more distant. On sizing up the situation, he may decide that business is falling off, the crop is likely to be large, and there will be a surplus of cotton for sale. In that case if he buys October even with December he is in for a certain loss of 40 points, or $2 per bale, because the near position will go to a discount just as soon as cotton points to the contract market for delivery. The same consideration should be borne in mind in regard to a large stock of cotton in warehouse at the future market and which may be tendered for delivery on the current month. A merchant should consider these factors before selecting his hedge month. Moreover, having contracts still open in a month that is rapidly approaching "first notice day," the merchant must again look over the situation carefully. He is most unwise to simply sit still on his long contracts and hope his broker will not receive notice of delivery. There is no assurance to be had on that point, and if there is a large stock or a large amount of cotton pointed for delivery, it is almost certain he will receive the notice. Then the merchant has the very unpleasant alternative of paying for cotton he does not immediately require, or else selling out his near month and buying a distant in competition with all those who have lingered like himself. The result is always an unsatisfactory transfer at a wide discount.

Abnormal Premiums.—It is quite possible that instead of selling at a normal discount to cover carrying charges the near position is at a premium, a condition much more annoying and even dangerous. Premiums will appear for various reasons. The crop may have been a very short one, so that the amount of cotton available for consumption is barely sufficient to meet the needs of the trade. In that case, the most essential will come first, and the least essential last. It is more important that the world should have cotton goods than that the cotton contract markets should have a stock of cotton in warehouse. The amount coming forward for delivery is almost nil at such a time, and, moreover, the stock carried in store begins to move out to the mills. It was for this need that it was being carried, and now the spinners want the cotton, and away goes the stock. This is a most natural course of events and to be expected, but the future markets are left without a stock at a time when the general scarcity of cotton is forcing prices to high levels amidst great activity. The near months go to a sharp premium as the merchants bid for the contracts in the hope of obtaining delivery of the remaining stock in order to sell it on to the mills.

Corners.—Strictly speaking, a corner never does actually exist in a commodity market, but the resemblance to a "corner" in securities is so close that the use of the term may be permitted. A stock is said to be cornered when one man or firm or interest owns contracts to deliver to them more shares than actually exist. The managers of such an operation know exactly how many shares the company has outstanding and, of course, they can easily figure when they have bought more than that number of shares. In that case those who have sold the stock short must "settle" with the managers of the corner because they can obtain stock from no one else. In a commodity market like cotton it is impossible for any one to say that he owns all the cotton in existence. No matter how short the crop and how tight the position, cotton will appear from remote farms, from mill warehouses, and from Europe to be delivered on the contract which has attained such a high price. The word corner then, when used in a commodity market, merely means a position so tight that it is impossible to buy contracts except at a very high figure. If there is time, cotton can be bought and delivered. If this is not the case, if the short has slept until so late in the month that he cannot get cotton to New York to deliver, then of course he is in much the same position as the security short. There is, however, this notable exception, that cotton is sure to be attracted for delivery, and that the contracts for sale against that cotton will afford a supply outside of the pool running the corner. There is, then, no such thing as a "tight" corner in cotton.

Recent Corners.—During the past twenty years there have been two corners in the cotton market, or rather, to put it more correctly, there has been one corner and another series of corners. The single corner was a deal run by Fernie, Wilson and Co. in the year 1900 in January delivery. This was supposed to be a success and, indeed, January did go to a terrific premium for those days in the last few trading sessions. A very severe spell of winter weather then set in and ruined the deal, so far as Fernie, Wilson and Co. were concerned, for they had great difficulty in moving the cotton out of New York. In 1910 a series of corners existed in May, July, and August contracts. This deal was run by two well-known New Orleans operators, Brown and Hayne, a well-known Texas man, E. G. Scales, and a well-known Chicago grain man by the name of Patten. The latter is supposed to have withdrawn from the operation after the Department of Justice began its investigation. During the final corner, August, 1910, the price of August contracts in New York touched 20 cents, a price unheard of since the Civil War. There were delivered to this pool 335,500 bales in May, 219,400 bales in July, and 113,100 bales in August. Some southern mills were interested in the deal, but the bulk of the cotton had to be sold out of stock in New York at a ruinous discount. It speaks well for the ability and courage of the managers of the operation that they were enabled to carry it through.

Difficulties with Corners.—The great trouble with a corner from the standpoint of the manager is to get rid of the cotton he must accept on delivery. He must keep on buying because, as the price advances and cotton comes to be delivered, contracts are offered for sale against it, which he must take or else allow the short interest to escape in this way. The result is that his average price is continually being raised and also he is continually having to pay cash for more and more cotton. That cotton he must resell, and as the corner price is purely artificial, he can only resell the cotton at a sharp discount. The usual result is that the net loss on the spot cotton has more than equaled the profit acquired by the sale of contracts to belated shorts. It is said that the late P. D. Armour was once told that there was a large speculative short interest in December pork and was asked why he did not "corner" that delivery. He is said to have replied, "To commit murder is very simple, the trouble is to bury the corpse." The latter phrase is so appropriate to the difficulties of a commodity corner that it has been universally adopted and to-day you will hear it said that a cotton corner does not pay because it costs too much to "bury the corpse."

Illustration of Loss.—An amusing illustration of the sort of difficulty with which the manager of corner must contend may be found in the following anecdote. During the last days of August 1910 a large New York merchant was playing golf with a large New England manufacturer when the latter remarked that he had 500 bales of cotton in his warehouse he did not have to spin until September, and that, if he had realized August would go to such an enormous premium he might have done something with that cotton. The merchant suggested there was still time to try, but the spinner said he absolutely had to have that cotton by the fifteenth of September and dared not attempt such a thing, supposing he could get the bales to New York in time to deliver, which he could not. The merchant said he would guarantee both ends of the dilemma, the cotton was loaded into express cars and sent over to New York that night as a second section of the regular New York midnight express from Boston. The cars were transferred at Harlem River to lighters, taken down the East River to the warehouse, the bales inspected for delivery and the August contracts sold against them at 19.75. The cotton was delivered on the sale and the merchant handling the transaction then inquired of the house to whom he was delivering, if they had any cotton of that grade for sale as he had a mill desirous of buying some. The upshot of the matter was that he bought back the same five hundred bales at 15.50, shipped it back to the mill from which it had come, and from which it had been absent for less than ten days.

This represented a loss to the managers of the corner of 425 points or $21.25 a bale on that five hundred bales. The mill made that much, less shipping costs and commission. The incident will show why it is expensive to "bury the corpse" in a commodity corner.

Sherman Anti-Trust Act.—In 1910 the Department of Justice investigated the cotton corner and the principals were indicted under the Sherman Act for a conspiracy. It was proved that they had an agreement between themselves, certain cotton mills and other associates to run the corner and further that they had mutually agreed to sell no cotton except on the understanding that it should not be resold in the New York, New Orleans or Liverpool future markets. The Government claimed this agreement was a conspiracy in restraint of trade under the statute, and the Federal Grand Jury in the southern district of New York indicted them all. The case never came to trial, as the defendants pleaded non vult and were fined. A clear-cut decision on the law in reference to commodity corners was thus not secured. However, taken with the losses always experienced in a corner, these proceedings have so far proved sufficient to prevent another cotton corner up to date.

Exchange Legislation.—There has always been discussion as to whether or not the exchanges should have rules to prevent corners. The difficulty is that, up to a certain point, it is for the interests of the trade that the short should be compelled to meet his contract obligations. Otherwise there would always be a suspicion as to the validity of the future contract. It is true that when you come to a situation like that of August 1910, it would be an advantage to have the corner broken. The difficulty is to draw a rule which will not be abused by either side of the market. Such a rule is more or less impossible to find and with the adoption of the new clearing house, the high margins were thought to have solved the difficulty.

Squeeze.—While we have never had a corner since 1910, we have had in recent years a succession of annoying premiums on the near deliveries. The trade call these minor corners a *"squeeze."* Such an operation differs from a corner in that the managers will always supply whatever contracts are wanted, but at a price. They select a certain difference, say 200 points premium, and at that figure they will supply all the near month contracts desired. The price is usually, but not always, a figure which will make the shipment of cotton for delivery difficult and expensive. The pool sells out to the short interest at a profit but at a price which will not attract much cotton for delivery.

Use of the Squeeze.—Sometimes the squeeze is run by a large firm with a considerable stock of cotton South which is hedged with contracts sold for more distant delivery in New York. They wish a larger stock of cotton in New York as a protection against these short hedges. So they begin to buy the near delivery until they have run it up to a price at which cotton begins to move up for delivery. They will have to take up the cotton, pay for it and carry it forward at a discount, but they figure that there is enough short interest to enable them to sell out sufficient contracts at a premium, so that they will incur no loss on the transaction. Even if they do not quite come out even, still they have a stock of cotton sufficient to prevent a squeeze on their own short hedges and they have not been at the expense of bringing the cotton to New York themselves.

Low Middling Clause.—It may be imagined that at best a squeeze is an infernal nuisance to the trade and at its worst, a positive menace. There has been as much complaint in recent years in reference to premiums on the near position as there used to be about discounts. Some provisions of the Cotton Futures Act have increased the danger of a squeeze. The low middling clause has made it more difficult to ship cotton for delivery, and the five day notice clause has increased the disadvantage of the shipper, because he must get his cotton to the future market well toward the first part of the month to be sure of a delivery. The Low Middling Clause is the worst of the two. Not only are strict good ordinary and good ordinary no longer available for contract delivery but the danger of rejection has been very much increased. There never was much cotton in these two grades delivered on contract but the merchant found the safety zone provided by them of great value. If his cotton were not classed as low middling, nevertheless it could still be delivered in the next lower grade. Now a doubtful bale may be rejected and it is difficult and expensive to sell rejections out of New York.

Clearing-House Regulations.—After the new clearing house came into existence an opportunity was afforded to regulate premiums on the near deliveries. It is provided that an original margin of twenty-five dollars per bale may be required on contracts in the near position and it is further provided that a margin may be required equal to the premium over the next month. This makes such a deal expensive, and while it has not prevented a squeeze, it is thought to have been a sufficient deterrent to prevent corners.

Southern Warehouse Deliveries.—It has been proposed that deliveries should be permitted on future contracts in other markets than the one in which the future market is located. There are very serious objections to such a scheme not the least of which is the danger of more manipulation by the certification of cotton in a market where delivery at the moment is not desired. For example, there might be a longshoreman's strike in Savannah whereupon all the

Savannah cotton would be delivered on contract at a time when no one could ship it. The discount resulting from such a situation may be imagined.

Solution.—The real solution of the trouble is to be found in the production of a surplus of cotton sufficient to leave a permanent stock in warehouse to be slowly moved out to the spinner. In 1921 the production was small but trade was poor and a stock of cotton was carried in New York most of the season so that premiums did not generally exist. The Low Middling Clause should be repealed. It is a costly folly for the farmer and a menace to the merchant. Finally, the five day notice might be changed back to three, with the old time provisions for deliveries on the last two days of the month. The five day notice has not accomplished a thing except to assist in making squeezes easy to operate.

Short Hedges.—It can be seen that a merchant who is careless with his short hedges, may get into trouble on basis with stock as well as with forward sales. If he buys cotton in the South to sell at 50 on May New York, and then there is a squeeze in May, it will easily be possible that the price of May contracts will get so far out of line that the best he can do is to get even for his spots. That means a loss of 50 points on basis. It behooves the merchant with short hedges, then, to watch conditions closely and move out of the near position at the slightest indication of trouble. It is not possible to lay down rules on such a matter, but we might suggest that a watch be kept both on the stock of certificated cotton available for contract delivery and also on the amount of cotton headed to the market for delivery. His broker will probably advise him if he notes "accumulation" of contracts in the month he has been using for short hedges. It is sometimes as well to give some consideration to such advice. One rule we can positively lay down as a law to which there is no exception.

A merchant should never stay short the current delivery after first notice day, unless, either he has the cotton ready for delivery, or unless he has the cotton en route to be delivered. If he violates that rule for any reason whatever he runs the risk of condign punishment.

Between Crops.—The last active month of the "old crop" is July, and the first active month of the "new crop" is October. A merchant carrying a stock over from one crop to the other and desirous of a hedge is often in a serious quandary as to how to manage, the more especially as the discount from July to October may be very considerable. July is the "last getting off place" for old crop cotton, and the loss between crops may be no idle jest. As a rule it is best to get over into the new as early as possible since if there is any shortage in the actual supply at a time when crop prospects are favorable, it may be difficult later on to buy July and sell October to advantage. This is especially the case if there be any reason to suspect a squeeze in July. In the case of a good sized stock and the prospect of a shorter crop the coming year it may be possible to sell the spots to advantage and get over that way. In any event, the sooner the hedges are over in what is bound to be their eventual home the better. Procrastination when things are going wrong is a fatal mistake.

Summary.—We have given an outline of the more usual problems which confront a merchant in the selection of the delivery month in which to place his hedges, and the more usual methods applied to their solution. There are other minor problems of the same nature coming up from time to time. The successful merchant spends much time and thought on his hedges while his less successful competitor dismisses them with but scant attention. It is possible to reduce basis risk and to obtain better results by paying careful attention not only to the market in which to place hedges but also to the contract delivery selected for hedging in that market.

CHAPTER XXXIII

WIDESPREAD USE OF FUTURE MARKET

Preliminary Remarks.—So far we have looked at hedging only from the point of view of the merchant engaged in shipping cotton from the South. We should leave a wrong impression did we not go further than this class in our investigation. All the importers in Europe use the future markets, placing their hedges in Liverpool or in this country as seems to them best. The spinners' brokers use the future market constantly both for their own account and for that of their mill customers. These two classes are really of the same character as the southern shipper. We must now consider the producer and the spinner, both of whom use the future market constantly.

Farmers and Futures.—The producer can hedge his crop by selling futures against it during the summer months, or in the early fall before he has hauled the bales to market. The volume of this hedge selling by the larger planters is considerable. In fact, I write this during the month of July and the daily paper states in its report on the cotton market: "The advance was checked by free selling from Texas where good weather has improved the outlook, so that farmers seem willing to hedge a part of their crop." Just as there are certain principles which the merchant does well to observe in his hedging, so there are certain broad rules the producer should maintain. He should have some knowledge of basis, not the detailed, technical understanding of market and contract we have seen to be essential with the merchant, but such comprehension of the subject as will enable him to deduce the proper relation between a basis middling future contract and some specific grade of spot cotton. For example, if he sells a December contract against part of his crop, and then in the fall has for sale a hundred bales of average strict middling, he should know what price that cotton should bring him as compared to December futures. He would be foolish to sell his spots and cover his future even when strict middling in his territory is worth 20 "on" December. The farmer should avoid "over hedging," and should never sell more than he has reasonable expectation of producing. In fact he should strive to under hedge, that is to say if he expects 500 bales, he would do better to sell only 300. With the margin of the additional 200 he is protected against an unexpected curtailment in his crop so that he is not short futures on a rising market. Moreover, should the general crop turn out small while he is fortunate enough to get a crop, he can sell his other 200 bales at a higher price in the fall. He runs the risk, of course, that the market may decline, as for example in 1920, but he is usually better satisfied to be somewhat under hedged. On the other hand, if he is able to secure a highly profitable price for his cotton by hedging a portion of his crop in midsummer, he is foolish not to make certain of that profit on part of his crop.

Small Farmers.—It is said that the small farmer is without any benefit from the system of future trading because he cannot afford to trade in a hundred bale contract. Indeed, if he is to avoid over hedging himself he must not trade in a 100 bales. Such critics overlook the fact that the merchant will always buy the few bales such a farmer brings to town because the future market offers him immediate protection. They also overlook the fact that such a farmer, if his standing be good in the community, can find a merchant who will buy ahead from him during the summer for fall delivery, combining the small lots thus bought together until he has a hundred bales which he can hedge.

Odd-Lot Contract.—It has been proposed that the Exchanges should make a fifty bale contract for the purpose of taking care of the smaller farmer. So far the Exchanges have refused to do so, because they have believed that the advantage obtained by the farmer who has already the indirect benefits of the future market, would not equal the evil done by attracting undesirable speculation. The evil in speculation lies largely in the attempt of ignorant and incompetent people to try their hand at the market. Incompetency which is financial rather than mental is just as damaging and dangerous. An odd lot contract offers a tempting bait to such people, since the initial margin requirement would be small.

Country Merchants.—The country merchant sometimes sells futures against cotton he has taken to account, and which he fears will shrink in value. Occasionally he will sell futures ahead in the summer against the anticipation of a large crop and a large amount of cotton to be taken in by him in the autumn. As a rule the country merchant does not like to hedge his cotton. The price is of tremendous importance to him because on a good price depends his ability to collect his accounts and to sell a large amount of goods. He is therefore always anxious to see high prices, and he dislikes feeling that anything he does may bring selling pressure on the market.

Factors.—The factor never uses the future market himself unless a bank insists he sell a cover against cotton on which he has advanced money to the country, which cotton in turn has become security to the bank against the factor's own loans. Ordinarily the factor handles cotton only on commission and sells future hedges only when his customer instructs him to do so. The customer will sometimes instruct the factor to sell his spots and buy an equal amount of futures. It makes no difference in his market position whether the farmer has his spots or whether he has the futures. In either case, he is holding so much cotton. If he can buy the more distant deliveries below a carrying charge, he is making a good move to transfer his spots into distant contracts. He must observe one or two simple rules in making such a change. In the first place, the basis question comes in again. When selling his spots, he must be certain he is securing a fair basis for the even running cotton. In the second place he must be careful to buy the more distant deliveries either at a discount or at such a premium as to save a part of his carrying charge. If he sells his spots during November and buys May contracts against the sale, he must buy the Mays at less than the cost to carry cotton from November till May. If his May contracts cost him more than the cost of carrying the spots from November to May, he might just as well hold the spots.

Spinner.—The spinner can use the future market to hedge a forward sale of goods and many spinners do so use contracts. He may buy contracts equal to the bales required to make the yards of goods sold. Some of the large eastern mills do this sort of hedging very frequently, and the southern mills do it all the time. Often the large mill cannot get a forward contract for all the cotton desired and is compelled to use the future market.

Spinner and Basis.—Of course the spinner can usually secure a forward contract from a merchant for the actual specific grade and staple to make his goods, in which case the merchant attends to the hedging. It may be that the spinner cannot obtain the cotton he wants at a basis he thinks attractive, it may be he would prefer the merchant did not know exactly what forward business he was doing, it may be he thinks he can save the merchant's profit on the transactions. It matters not for what reason the spinner elects to be his own merchant, provided he knows he is now a merchant as well as a spinner, and has assumed all the merchant's risks. He must not flatter himself that, simply because he is a spinner, he can expect immunity from the basis risk. He knows the merchant will not sell him in November even running strict middling at the same price as May futures. He is accustomed to basis himself for he must recognize it every time he figures upon the sale of a yard of goods. Still, he is accustomed to buying at a fixed basis from the merchant, he knows little about basis conditions, and he often fails to recognize the risk that between November and May his hedge may vary in its relation to the character of cotton he wants. There seems to be a sort of mesmeric, fatal attraction in the idea that a spinner, acting as a merchant, is nevertheless entitled to escape the merchant's perils. The spinner has some hazy idea that he is entitled to consideration and respect, and must not be injured by having the basis widen out on him. There have been many ponderous articles written to the text that "when a spinner buys a future contract the value of that contract in relation to even running cotton must not change." A somewhat pathetic illustration of this feeling may be seen in the testimony before the House Committee on Agriculture in the spring of 1914. A prominent southern spinner, well liked in the trade, had sold some goods in the fall and bought a 1000 bales of May futures against the sale. The autumn of 1913 was very stormy and the grade of the crop was very low. Every one knew that in November, and yet the spinner was much aggrieved to find out in April that he could not get his even running middling cotton anywhere near the price of May futures. Indeed he had some little difficulty in getting even running middling cotton at all, despite which fact he was convinced that the future contract should have maintained the same basis as in November. It is absolutely essential that, when a spinner does his own hedging, he should study the basis, and watch the basis risk in the same manner as the merchant.

Yarn and Cotton Goods.—The yarn and cotton goods merchants can use the future markets for hedging purposes, provided they will take the pains to figure out a working basis between their goods and the future contract. The European dealer is accustomed to doing business on a narrow margin of profit and to taking advantage of every opportunity he can to protect that margin. The European merchants use futures constantly against their merchandise and against their forward sales of merchandise. The American is accustomed to wide margins and to paying much less attention to the smaller details. He does not use the future contract market for hedging merchandise to anything like the extent of his foreign competitor.

Semi-Speculative Hedging.—So far we have considered simply those hedges which are plainly trade insurance and which contain no speculative element, with the exception of basis, and that is an involuntary risk which the bulk of the trade would like to see eliminated. There are, however, contracts bought and sold as hedges where the speculative element is quite prominent. The merchant sees plainly that if certain events do befall he will be in need of additional protection. That protection he seeks to find through the use of the future contract. The speculative element in such transactions is to be found in the fact that if the anticipated event does not occur, the merchant will not need the hedges, indeed, he will be better off without them.

The Farmer and Semi Speculative Hedging.—It is a well known economic fact that a small crop costs more to raise than a large one. The planter can raise 300 bales, his usual crop, at a certain cost. If the weevil or weather reduce his crop to 100 bales, the cost to raise that 100 bales will be practically the same as his full crop. On the other hand, if the weather is so favorable that he raises 500 bales instead of 300, the extra 200 bales will cost him little extra outside the cost of picking and ginning. The result is that, unless the price gets very low, he is doing very well indeed with a large crop. It is possible for the farmer to use the future market for semispeculative hedging in connection with these crop changes. Suppose he is convinced that, short of some unforeseen disaster in the fall, he is going to have a large yield. Then he can sell hedges against either his whole crop, or only the additional cotton he has reason to expect. These sales are hedging in the sense that they are intended as a protection against a fall in price for his expected crop. At the same time they are speculative because the farmer is accepting the risk that a disaster will overtake him and cost him a loss on these additional contracts against which he does not raise the cotton. A year when such semispeculative hedging was highly profitable to the far-sighted farmer was 1920.

On the other side of the account, it is also possible for the farmer to use the future market. An actual occurrence in our office will best illustrate the idea. In July, 1905, the market had advanced quite sharply owing to bad weather and an anticipated crop shortage. A South Carolina customer was in the office one day, and as he had been long 200 October with us for some time, I remarked that he had a handsome profit on the books. "Well," said he, "I reckon it is profits in one sense, but as a matter of fact it's kind of hedges. You see the weather was powerful bad in the spring, and I was sort of wondering where I would come out on the year. I saw a millman one day and he said business was picking up, so I said to myself why not let those fellows in New York raise the other 200 bales and I did. Those two Octobers are going to pay out my place the same as usual." A somewhat similar incident on a larger scale took place in 1909. We had a customer who was a very large dealer in many articles and who had a couple of cotton plantations in addition to other interests. He was long 5,000 January contracts with us and reported crop conditions as so bad that prices would sell very high. One day in early July he called us on the phone and told us to sell out his cotton. We did and I asked him if he were afraid of the market. "No," said he. "I think cotton will go very much higher, but you see I am going to Europe with the family and I want to be out of the market. Besides, I bought those contracts against the cotton I am not going to make, and now I have the regular profits on the farm made and I am through with them." Both those men admitted to the speculative risk in their transactions, but both were really dealing in the market for the express purpose of preventing loss. We can quite correctly call such operations semispeculative hedges. A word of warning may be needed. Those men had definitely studied the situation and had definitely decided on a line of conduct. They did not simply rush in to buy cotton without thought because some one said it was going higher. The average producer to use semispeculative hedging successfully must needs devote some thought to his own problem and to the general cotton outlook.

Call Cotton.—The spinner can use the market for semispeculative hedging, and regularly does use it every year for this purpose through what is known as "call cotton." This was originally a scheme to avoid risk in hedging by the mill. Suppose a spinner uses strict middling for his goods. At the opening of the season he has trouble in selling goods, and yet he knows that if he does not secure the quality of his cotton promptly he will have difficulty in getting it at all. He has two alternatives: either he can sell his goods and take a chance that the low price at which he must needs sell will later be balanced by a low price for his cotton, or he can buy his strict middling and thus go long his raw material in hopes that the market price of his goods would later balance him out. Neither alternative is pleasant and the method of buying his cotton "on call" was invented. He makes a contract to buy the strict middling at a fixed basis on some future month, the actual price to be set when he orders the future contracts bought. For example, the Poco Manufacturing Co. buys from Smith and Co. 1,000 bales of strict middling, 1 and 1/16 inch staple at 150 on December, "spinners' call." Then the mill knows exactly what the cotton will cost them at any one time, because all they have to do is to get a quotation on December and add the 150 points. When they have sold the goods, they "call" the cotton, that is, they instruct Smith's broker to buy 1,000 December against that sale. The message to Smith will contain all the information, thus "Bought 1,000 December 22 cents yours. Instructions A and Co. fixing price thousand bales contract 34 September 1 Poco Manufacturing Co." The price of the strict middling then is 23.50 landed at the mill.

Meantime, Smith pays no attention to what the mill is doing but proceeds to buy his cotton along as he can get it, instructing the broker each time to sell December against his purchases. If he has bought the whole 1,000 bales before the mill calls, then he has a thousand December short as a hedge, which the purchase of the mill will cover. If he has only 500 bales bought, then the purchase will close out his 500 short hedges and leave him long against the cotton he has still to buy. If he has bought no cotton, then the purchase by the mill gives him the needed long hedges. In any event all that interests Smith is his buying basis as compared to December, and all that interests the spinner is the price at which he can sell his goods.

This call cotton idea has been extended in use until it is often a method of trading between merchants themselves. Cotton is bought subject to "seller's call," that is to say the seller agrees upon a fixed basis for the quality but is allowed to fix the actual price when he pleases within certain time limits. He is instructed by the purchaser through whom to sell the hedges, when he decides to fix price. There are multifarious methods of using this call system of trading in cotton. One point must always be remembered by the merchant and that is: the basis risk still remains the same as with ordinary straight selling.

Speculative Call Cotton.—When properly utilized, the call scheme is a more perfect protection than the spinner can obtain in any other manner, since the price of his raw material is not definitely fixed until his goods are sold. The only danger to him is that so many call hedges accumulate in one delivery that their covering runs the price of that delivery to a premium and thereby advances his raw material costs. Even that does not trouble the spinner unless business is so poor that the trade will not accept the goods at the necessary premium.

On the other hand, the call system can be used so as to be anything from a semispeculative hedge to an out and out speculation on the market. The spinner must realize that, simply because he has secured the comparative value of his quality, it by no means follows the price of his raw cotton is fixed. Yet, the spinner will go ahead and sell his goods, and then sit back and refuse to call his cotton because the price is too high. This can be disastrous and it often is most expensive. Another fatal habit is to stay short of the call month over the first notice day. If the mill has sold the goods and refrained from fixing price, then the mill is short the contracts which it has not bought. The merchant will be paid the cost of the cotton as determined by the price at which the contracts are covered, and no amount of argument will alter the fact that the spinner is short the market the instant he sells the goods. Now there is a rule of trading which must never be broken and that is: *Never* stay short the current delivery after the first notice day, unless you either have the cotton ready for delivery, or unless you have the cotton in transit for delivery. There are no exceptions to that rule, violation of which is punished by swift and dire retribution. The spinner persistently and habitually violated it in New York for years and always complained when his call cotton hedges cost him a snapping loss. The New England mill finally learned by bitter experience not to break the law. The Manchester spinner is still punished in every active delivery in Liverpool. The market reports at the end of the month regularly contain the statement "Near month was very strong at a new high level premium, owing to spinners' calling."

Call Cotton as a Semispeculative Hedge.—Yet the spinner can use the call system successfully as a sort of speculative proposition. In case of a sharp fall in prices, it is easy for him to refrain from calling and, keeping a stop loss order on his futures, "ride the market down" quite comfortably. An excellent illustration of common sense in this regard came to our attention in the summer of 1914. We had a spinner who had bought several thousand bales of cotton based on December to be called by him through us for the account of a Southern firm. The spinner came in to the office during the dark days of July and announced that he had sold his goods and ought to call his cotton, and yet was afraid to do so. He said if he did so, he would more than likely be left with the cotton, because if war did come and there was the inevitable panic, he was much afraid he would get cancellations on his goods sales. He finally decided that the best thing to do was not to call his cotton then, but to put a stop order a cent or so above the market, take the chance he might lose a portion of his profit by getting that stop caught on an advancing market, and simply sit still. This he did, the War broke out next week, his goods sales were cancelled, and he was comfortably out of the market through the long decline.

Spinners Selling Futures Against Risks.—The spinner can also sell futures against unsold goods or goods in process, when he thinks conditions are such that he will have difficulty in selling. We had an interesting experience with a large mill who sold futures against the risk of a panic. This mill was short a block of cotton with us in 1920 from January on, transferring its sales ahead, each time at a loss. We were very curious as to the reason for this trading, as we knew they were doing all the business they could, running day and night and sold up for months. Finally one of the officers being in our office, we asked him if he would mind telling us why they stayed short that cotton. The reply was that they were afraid of the whole situation. They thought the demand for goods highly speculative, prices outrageous, and they did not like the breakdown in raw silk. They had gone over the whole situation at a directors' meeting, decided there might be trouble and that if there was trouble they would receive a lot of cancellations of goods sold, goods that had been made out of very high priced cotton. They wanted insurance and they sold those future contracts. "If we are wrong, then the insurance will cost us the loss on the futures which we will have to take from our profits. If we are correct and there is trouble, the insurance may be very useful." No one who recalls the history of 1920 from July on will have any doubt that the insurance was most "useful."

I am reminded of an anecdote which illustrates the unintelligent manner of treating the same situation. A friend of mine, partner in a large firm dealing in all kinds of cotton, was approached for advice by the president of a small tire concern. This firm had bought yarn for six months ahead, and worse than that, it had bought long staple cotton for another six months' supply of yarn, which it was carrying for a mill under contract to make up into yarns for them. In other words they had a year's supply of yarn on hand. In July, 1920, my friend was asked for advice and was told the full situation. They had contracts for tires up to about three months and were dead long the rest. They wanted to know if he thought the situation safe. He told them he thought it about as reckless a speculation as he had ever encountered and strongly advised they sell Egyptian futures in Liverpool as fast as the market would take them, until they were hedged up. Next day the president told him that the board had decided as they had never speculated they did not like to begin. My friend remarked "Did you ever hear of such inspired idiots? Anyway, a hint is as good as a kick to a blind mule, and believe me I am selling Egyptians against a lot of my staple sales to these tire yarn birds. If that is the way they do business, we never will be able to deliver some of our high priced cotton." The tire company had a narrow squeak while the profits on my friend's Egyptian sales were convenient later on in the year.

Investment Buying.—The mill can use the future market in times of low prices to buy their raw material ahead even though they have not sold the goods. When cotton is at or near the cost of production, the far sighted mill can take a chance and carry contracts to a fair sized amount. The profits will later reduce the cost of their raw material very appreciably. The trade calls this sort of purchase "investment buying." There have been large amounts of cotton taken out of the markets in years like 1914 in this manner. In fact, we had a mill in the early spring of 1915 which was long six months or more supply of cotton, simply because they thought the price so low that it would be good property, when trade revived.

Summary.—We have only touched upon the subject of semispeculative hedging. The ramifications of the use of the futures markets in this manner must be apparent to all. There is no doubt as to the speculative element in these operations, but the speculation is subordinate to a definite insurance motive. Intelligent use of such insurance can be made very profitable in the long run, even though the premiums paid from time to time for the use of insurance not needed may be considerable. As the millman put it: "if we need the insurance, it is almost priceless. If we do not need it, the cost is not great."

CHAPTER XXXIV

METHODS OF HANDLING HEDGES WITHIN EACH FIRM

Hedges of Branch Offices.—The handling of the hedges within a single organization is a matter requiring some care because, with a business of any volume the outstanding future contracts will get much involved if some definite rules be not laid down as to their management. The first question is what to do about the hedges needed by branch offices. Are these contracts to be handled by the branch office or by the head office? There are advantages either way, for, if the branch handle its own hedging the orders will not be so delayed and the executions will be more satisfactory, while when the head office handles all the futures, it is simpler to get the hedges placed to the best advantage. Speaking generally we can say that where the branch does a separate business, that is where the manager or partner makes up his own limits and his own offers, then the branch handles its own hedges, subject to some supervision from the home office. On the other hand, where the branch simply buys cotton on limits provided by the head office, or where it is simply a selling agency, then the head office does all the hedging.

Branch Office at Future Market.—The very large firms have recently taken to having their own firm at the large future markets to handle their own future contracts. Such a branch is in charge of a resident partner, or partners, and does all the business for all the various offices at home and abroad. Sometimes these firms also solicit outside commission business as well, but their primary object is to handle the future contract business of their own firm. Each office wires in its orders, and in many instances each office is treated like any other customer, being called for margin and charged the members' rate of commission. Of course any amount earned above the actual expense of the office is so much gain for the firm. Moreover, this method makes it easier to transfer hedges from one month to another or even from one market to another, since the firms' entire hedge interests are concentrated in their own office. The disadvantage is that the firms are able to employ only their own capital. If they do their future contract business with a commission house they can secure a credit upon their open contracts. In other words, if their standing is good and the credit rating and reputation excellent they can make arrangements to have the loss on open contracts carried for them by the commission house up to some round amount. Such arrangements are useful in times of financial stress such as come every season.

Separate Contracts.—There are two general methods of handling hedges, although there are as many different varieties and modifications of those systems as there are firms in the business. The first idea is to keep all the contracts separate so that each individual transaction may be followed through from start to finish as we traced out the dealings of Smith and Co. If 100 bales are sold the Poco Manufacturing Co. and December futures purchased against the sale, then that December contract is kept open until the spots are shipped. It makes no difference that a hundred bales of some other grade are bought next week and 100 December contract is sold against that as a hedge. The firm remains long 100 December against the sale to the Poco Manufacturing Co. and short 100 December against the 100 bales of spots until the strict middling for the mill is bought, and the other hundred spots are sold. Now all future commission houses make up account sales according to the "earliest date and highest price," so if all these future contracts are to be kept open on both sides of the account, then special arrangements are necessary. They can be made easily enough, but careful bookkeeping is needed to see that some single contract is not lost sight of in the array of futures which will accumulate as the season goes on. Moreover, the expense of such a method is considerable as a future commission is incurred on each and every transaction.

Balance System.—The other scheme might be called the "balance system." It is believed that as every purchase and every sale is figured down to a certain future month as a basis, there is no need of keeping all these futures open. If good middling is bought at 60 on December and strict middling at 40 on December and so on, then all purchases and sales are figured down to one common denominator. If that be the case, why cannot the purchase of one grade of cotton stand as a hedge against the sale of a different grade? Why is it necessary always to use the future contract and pay future commission charges? A balance is struck at a certain time, all purchases and sales of either spots or futures are figured, the stock of cotton on hand is included in the calculation, and then the balance is hedged. Thus:

Long		*Short*	
Cotton in stock.....	4200 bales	Unfilled orders......	1200 bales
Purchased to-day....	600 "	Orders to-day.......	1600 "
		Futures	3000 "
TOTAL LONG......	4800 "		
		Total Short.......	5800 "
		Less Long........	4800 "
To balance, buy 1000 futures.		NET SHORT.......	1000 "

Striking Balance.—In theory, this is all very well, but in practice, just when should the balance be struck? In the days of quieter markets many firms used to strike their balance about 2:30 New York time, so that they could either buy or sell the net prior to the close of the market. Their buyers and agents were compelled to report from the country all purchases by telephone up to that hour and were not permitted to buy later without a special authorization from the head office. The risk of market fluctuations through the day was accepted on the theory that what was lost in this manner one day would be gained on the next. Since 1914 the fluctuations have been so violent that this scheme has been too dangerous for most firms. They have adopted various expedients to get away from the intervening market risk, such as striking a balance every hour or so, or combining the separate contract system with the balance method. For example, when cotton is moving rapidly and there is a fair chance of making heavy purchases during the day, an estimate would be made of the amount likely to be purchased, this estimate would be compared with the orders already in hand, and the balance would be immediately hedged, irrespective of orders being received during the day, a balance being struck again in the afternoon. Sometimes the call cotton is treated separately, individual contracts being kept open on all such orders. Sometimes each branch is instructed to hedge all cotton immediately, except certain grades and staple for which there are known to be orders on hand. In short there are all sorts of ways in which the market risk can be handled.

Basis Risk Concealed.—The underlying objection to the balance system is the danger that the basis risk will be so concealed as to be overlooked to the loss and possible ruin of the merchant. Where the hedges are kept as a separate part of each and every transaction this is not likely to happen because the merchant has a sharp reminder before him in plain figures every time he has made a profit or loss on basis. With the balance system individual sales and purchases tend to get lost in the mass. It is so easy to find a lot of cotton which is attractive both as to grade and staple and only a few points off in basis, and then to make the purchase, saying that the few points will "get lost in the wash." They do, so far as knowledge of the loss is concerned but the dollars and cents turn up again in the firm's general balance at the end of the year. If a man is to buy strict middling at 20 points on his hedge month, and buys it at 25 on instead, or if he is to sell at 225 on and sells at 220 on instead, there is a loss of 5 points in each transaction. If he knows the loss is there, if he thinks it good judgment to accept that loss and strive to recoup on some other purchase or sale well and good; but if he simply dismisses it with a shrug of the shoulders and hopes that it will take care of itself in some undefined manner, then that loss will surely reappear in the trial balance. In instances of which I have known the concealed losses broke the firm after a season or two. The basis risk is always present and must always be understood and calculated, no matter how the hedges are carried.

Odd Lots.—Another matter requiring good judgment in hedging is the question of the "overs and unders." We have assumed that all purchases and sales will always balance up to the even hundred bales, but this is far from being the case in actual business. The day's purchases are as likely to be 666 bales as the even 600. The day's sales may be 1,635 as well as 1,600. What is the merchant to do with his odd lots? One theory is to hedge anything over 50 bales only. The theory was that the amounts of cotton would average themselves up so that if 25 bales were long to-day, there might be 25 bales short to-morrow; or, that if the account was net long to-morrow, the chances were it would be 75 bales long and thus an average would be struck. The trouble with this idea is that the price must be averaged also, and that does not always prove out. A widespread theory is to "take a view" on the odd lots, and either stay long or short, as the merchant's opinion of the probable course of the market would indicate. There is much to be said in favor of this method. If the merchant's judgment is correct a vexatious problem is solved. If he be incorrect, he will acquire only a moderate loss which can easily be absorbed. In any event the itching desire to have an "interest" in the market is satisfied at a modicum of risk.

Speculating with Hedges.—This brings us to another thought, namely "never speculate on your hedges." The contracts are bought or sold for protection against the risks of the general market, and, if the merchant is to be playing with the contracts all the while, he might just as well stay out and out long or short and save his commissions. The risk is no greater than when he refuses to persist in the course he has marked out for himself. The great temptation usually comes in closing out the hedge, for almost any man prefers to be protected either at the time of making a forward sale or at the time of buying the actual bales in the South. When he has bought cotton on basis, sold futures against it, seen the market steadily advance, been constantly called for funds to margin his futures to the market, and at last has sold the spots and is confronted with the necessity of buying in the futures, then the temptation to wait a while, to buy them in at a "reaction" is very great. If the market will decline a few cents a pound or so, he can save a large part of his margins, he can look at an account sales, which does not show such an apparent loss. He forgets that he has already made the profit upon which he was figuring, and reaches out after an additional profit entirely unconnected with the original transaction. There has been more money lost in this foolish sort of speculation than in any other common mistake in judgment. A single illustration from my own experience will suffice to show the danger. When

I was in Memphis years ago, as an office boy, the local partner had a stock of 1,000 bales in December against which he had sold futures as a hedge, with the knowledge and consent of the head office in Arkansas. The market advanced very sharply on a Government crop estimate, and on the rise the spot cotton was sold. There was a loss of $5 per bale in the short futures, although we had made a profit of $2 per bale on the basis sale. The Memphis partner allowed that he could get those futures back cheaper by waiting a day or two. "The market had gone up so fast, it was bound to react." The same old myth that attracts all the moth to the candle. The reaction was not perceptible and the market steadily advanced. Finally we had to ask the home office for financial assistance, one of the senior partners came to look us over and the first thing he found was this 1,000 bales of futures dead short with an open loss of $15,000. It was my privilege to overhear what he said to the local partner, it was a severe commentary on speculating with hedges. We finally did get a "reaction" on which we escaped with a final loss of some $7,000 but the whole affair was so entirely unnecessary that it made an impression on me.

Trading on Hedges.—While this sort of speculation with hedges never brings anything but loss, that does not mean to say that the thoughtful merchant must stick slavishly to the theory of complete protection, nor does it mean he must never touch his futures. We have already discussed at length methods by which he may obtain better protection by transferring them from market to market, or from delivery to delivery in the same market. There are certain rare occasions when he may dispense with them entirely. Let us suppose a merchant buying cotton in the South at 6 cents in 1904 or in 1914 after the exchanges had reopened. Certainly so long as he buys only enough to keep within the limits of his capital, he need not sell futures against a decline of 6 cent cotton. As a matter of fact, almost every firm is long a little cotton at such times and the position is entirely justifiable. The top of the market is not so easy to find, still even there some liberties can be taken occasionally. For example, suppose a merchant sells cotton forward to a mill to cover which he should buy December futures at 25 cents, and suppose, as was the case in 1920, the market is declining rapidly so that before he can get his cover placed the price is 24.50. Is it not perfectly proper for him to stay short the sale, placing a stop loss order with his broker to buy the hedges in at say 24.90? The risk he then assumes is the risk that his stop will be jumped. Conversely, if he is long 100 bales of spots in the South with an advancing market, why not carry the cotton and place a stop loss order behind it? Here the risk of the market is so much greater that more caution is necessary. February 1, 1917, showed the futility of relying upon a plain stop order for protection. All the selling came from the South that morning and much of it cost the merchant placing the orders a great deal of money.

Risks in Trading with Hedges.—It may very well be that the merchant is justified in departing from his usual custom and being without hedges, but he must recognize that, when he does so, he is accepting the risks of the unexpected and he should be very careful not to accept risk of a loss that will cripple him. Moreover, he should observe the broad general rule that he is doing something extraordinary, something that he should not do at all under ordinary circumstances. Recognizing this fact, he must ask himself, first are the circumstances really so extraordinary, or do I just think they are because of my market opinions? Second, he must ask himself, am I taking a risk which in view of my capital, I am not justified in accepting? Before trading on his hedges a merchant must ponder seriously and answer honestly both those questions.

For example, it is often possible in times of great market excitement to take off hedges temporarily, immediately replacing them when the panic is over. On February 1, 1917, a merchant who could buy his futures in on the decline, could afford to do so with the idea of selling them out again on the next advance. The submarine news might have justified such a drastic decline in the price of cotton, but it was a foregone conclusion that, even so, the decline was not going to take place all at once and with no rebound. When I was in Memphis, we had a stock of cotton with futures sold against it in New York. Sully failed and the market went all to pieces that afternoon. It was proper to think seriously about buying in all short hedges and carrying cotton "open," with the idea of putting the covers back as soon as there was a partial recovery. Many firms did so, but the one by which I was employed did not, and its reason illustrates exactly the question of justifiable risk. One of the partners had just died, his estate still had an interest in the firm, and the surviving partners said, "We cannot cover those futures, much as we should like to do so, because while our best judgment is that prices will come back, we are trustees for the widow's interest, and we cannot afford to take any risk not essential to the conduct of the business."

Basis Limits at the Opening Season.—There are many methods of ascertaining what basis limits to put upon the first offers and sales to be made in the summer for the coming season. Usually the custom is to take the final basis of the preceding season and try to get the mills to come as close to that figure as possible. If this cannot be done and the merchant believes the crop will be short and the basis likely to widen, then he will refuse to sell forward. If business is at all brisk, the mills will finally have to come to the high basis. If business is poor they will hold off, and first one merchant and then another will gradually ease off a trifle until a lower basis level is established. The same is true of an improving crop prospect, first one merchant comes down and then another, until the basis level is permanently lowered.

Basis Limits.—Once enough cotton is sold forward to give the merchant an idea as to the general market, he makes up his buying limits for the country. He will start off at a figure which shows him a substantial profit on his forward sales. We have seen how the weather and market conditions will later modify such an initial basis. Later on in the autumn he will be refiguring both his selling and buying basis as he is forced to do by the constantly changing character of market conditions.

Futures and Spots.—This brings us to a question which has been argued for years and always will be argued, and that is, which controls the price of cotton, futures or spots? In times of short crop, it is usually said that the South is standing for its rights and thus forcing futures to advance by the strength of spots. In times of abundance and weakening markets, it is always claimed that futures are depressing the price of spots, because they steadily decline. As a matter of fact the whole discussion is futile, for the simple reason that we have not two separate markets, but only one market. Cotton is cotton whether you have 100 bales of spots in your warehouse, or a hundred bales of contracts on your books. The whole market is one, and it moves as one. The future market is simply a vast clearing house, and through it the tides of commerce rise and fall on the beach of price. It is perfectly true that the future market is the more visible evidence of the tide, and as such it is much more volatile. The price of cotton as expressed in contracts will run ahead of the price of cotton as expressed in spots, but neither is the dominating factor. Each is part of the same great market, and consequently each will eventually seek the same level. The more volatile future market may make haste rapidly up the beach like the rippling little wave which marks the absolute top of the tide. It is absurd to say that when the tide recedes, the reverse is not the case. The whole body of water moves slowly but surely up the shore and down again, and the little ripples which cause so much excitement among the children on the beach, are absorbed once more in the great whole of which they are the part. Do not mistake the ripple for the ocean, and on the other hand do not believe that the ripple is separate from the ocean and therefore of no meaning. Each is a part of the whole, and that whole moves together.

Figuring Limits.—As a rather practical illustration of this important fact, consider the merchant at his desk, in the middle of the season, trying to figure his limits for the day, both buying and selling. He has before him a list of his own stock, prices, grades and staple, he has the reports on his offers East and to Europe the night before, some acceptances, and many refusals, each of the latter quoting him figures from other points in the belt at which the cotton can be bought. He has reports from all his branch offices, agencies and country buyers on the attitude of the country, the probability of the supply, particularly of certain grades, the prices offered by other merchants and of course a statement of any specific lots of cotton which can be purchased that day. He has a similar set of reports from his selling agencies East and in Europe, or if not from his own people, from his spinners' brokers. Finally he has the early Liverpool future quotations, which may or may not appear of consequence to him, depending entirely on his other information. In addition to this he will sometimes have the wired opinion of his several future brokers in New York and New Orleans, to which he will give cursory attention as representing their views of the consensus of opinion on news and events. He will also, particularly early in the fall, have accurate weather reports, not only the Weather Bureau official reports and map, but also his own private reports from his own men in his territory. From all this variegated mass of information he selects the factors he deems of importance that day and makes up the limits. Who can say in advance which bit of information is the determining factor, if indeed any single fact in the lot is determining? One morning Liverpool is up sharply with a dispatch reporting the settlement of some international question long hanging over the market. In that instance, the merchant is influenced by the news from the future market, because it plainly indicates the introduction of a new factor, which will mean a broader demand and probably higher prices. On another morning Liverpool is worse than due, and New York follows suit, but the merchant has so many telegrams requesting offers and so many reports of a falling off in the receipts in the country, he is entirely swayed by the spot news. He simply ignores the decline, and shortly the reports of the spot demand bring about a quick recovery in the future markets. You cannot decide which controls prices, for the good and sufficient reason that each is part of the same, and neither controls the other, both move together.

PART IV

SPECULATION

CHAPTER XXXV

SPECULATION

General Remarks.—Speculation appears to have an especial fascination for all, and is the subject of more thought and more assertion pro and con than any other element in marketing. So far as possible we shall consider only speculation in the cotton market, but it is impossible not to enter more or less upon the general subject. Speculation enters into the marketing of all commodities, and, like most human institutions, is neither wholly good nor wholly evil. One rôle the speculator has played successfully for centuries, and that is to appear as a sort of general scapegoat for all the mistakes and ills of humanity. Ever since the far-away days when the speculator was called a "forestaller" he has been vehemently denounced as responsible for small supplies and high prices, or for large supplies and low prices. Of course, the speculator seeks to take individual advantage of his judgment of market conditions, but he is no more responsible for those conditions than he is for the rain which ruined the crop in the Atlantic, or the sun which dried it up in Texas. It is human to blame others for our own mistakes. It is far more agreeable to deny the truth and assert that it is only the deceit of others than it is to face unpleasant facts and govern our conduct accordingly. Nevertheless, in spite of centuries of denunciation and much attempted legislation, the speculator still persists and still does his work in distributing commodities.

The Individual and Speculation.—In speculation there is both good and evil, but we cannot consider the matter from that standpoint alone, or rather we must consider the good and the evil from two different angles. For speculation affects both the individual and the community, and what is good for the one may be evil for the other and vice versa. We shall devote one chapter to the individual speculator and a final chapter to speculation and the community.

Definition of Speculation.—At the start we need a working definition of the word "speculation." Webster's Unabridged Dictionary supplies the following:

> Act of speculating, as by engaging in business out of the ordinary, or by dealing with a view to making a profit from conjectural fluctuations in the price rather than earnings or the ordinary profits of trade, or by entering into a business venture involving unusual risks for a chance of an unusually large gain or profit. Speculation while confined within moderate limits is the agent for equalizing supply and demand, and rendering the fluctuations of price less sudden and abrupt than they would otherwise be.

That definition covers the popular comprehension of the word, although more emphasis is usually placed upon the earlier part of the paragraph and less upon the sentence about "equalizing supply and demand." Yet it is here we must look for the real definition of speculation, for the speculator is recompensed for his share in distributing the crop in such manner as to render fluctuations less violent. Webster gives another meaning of the word, as follows:

> The faculty, art, process, or product of intellectual examination and search; especially reasoning taking the form of a prolonged and systematic analysis.

It is popularly supposed that the speculator is a mere creature of fortune and that at his best his intellectual labors are limited to some sort of legerdemain, whereby from reading the record of past events upon the "tape," he is enabled to correctly forecast future fluctuations.

Nothing could be further from the truth, and any individual who essays to speculate upon any such platform will inevitably fail. The speculator, to succeed, must indulge in much "reasoning taking the form of prolonged and systematic analysis." Only when he thus prepares himself can he succeed, and then his success comes because of much thought, long experience, and persistent self-control. He has managed to assist in the distribution of a commodity in a manner to "render the fluctuations in price less sudden and abrupt than they would otherwise be."

Speculation and Gambling.—It is often said there is no distinction between speculation and gambling, or so slight a distinction that no real line can be drawn. No amount of exposition or explanation will ever stop the world from confounding speculation and gambling. In the first place, to make the distinction requires some real thought upon the subject. In the second place, the use of the word "gambling" connotes some sort of moral stigma, so that the term is popular with those who, either sincerely or for ulterior motives, are anxious to denounce speculation. Nevertheless, a very real distinction does exist between the two, and that difference should be clearly understood in order to think correctly upon speculation. Prof. H. C. Emery has made the matter clear in the following paragraph[1]:

> Still another distinction that must be made is that between speculation and gambling. In the broadest sense, of course, there is a gambling element not only in our bets, but in all our activities. If gambling means simply the taking of unreasonable risks, almost every act of our lives might be accused of having a gambling element by those whose opinions as to what risks are worth while differed from ours. . . . Every transaction of buying and selling necessarily involves a risk. Betting on merely incidental

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[1] "Should Speculation Be Regulated by Law"; *Regulation of the Stock Exchange*, pp. 830-32.

results of particular contests is the assumption of a risk that did not exist before the bet was made. It would seem as if a fair distinction of this kind might be made, speculation being defined as the assumption of inevitable business risks of fluctuating values; gambling as the assumption of purely artificial risks in connection with fortuitous events."

Speculative Risks in Mercantile Transactions.—The purchase of any article for sale introduces the element of risk, and thus becomes speculative. The country storekeeper who buys a stock of dry goods to sell at retail runs the risk of a decline in price as well as the further risk that he cannot sell those goods fast enough to be rid of them before popular desire swings to some other line and leaves his goods unsold on the shelves. The contractor who agrees to erect a building at a specified price within a specified time goes short not only the material to make the building, but also the labor of those mechanics he will need to actually erect the structure. As it is in the world at large, so it is in the cotton market, buying and selling means an element of speculative risk. It is to reduce this risk that merchants developed the system of protection known as "hedging," and thanks to this protection the cotton merchant has much reduced his inevitable speculative risk. Speculation, however, remains of necessity and exists in all classes in the trade. The farmer who brings his bale to town for sale refuses the bid and "holds" for a higher price is speculating with that cotton. The merchant who either buys and does not hedge, or sells and does not cover, is speculating. The spinner who sells goods ahead and does not buy the cotton is speculating. That does not mean to say that it is wrong for any one of the three to so conduct his affairs. That is beside the question, for all we wish to note is the fact that speculative risks exist and are accepted all through the process of marketing.

Speculation in Futures.—It is universally admitted that speculation does exist in the future contract markets. In fact, it is strongly asserted by many that speculation makes up the greater part of the transactions in futures, and that speculation really exists only in the future markets. Both statements are erroneous, and both statements do harm because they have led to loose and inconclusive thought upon the matter. We have seen that in 1914 an absolute analysis of the outstanding future contracts in the New York market showed them to be about 85 per cent trade hedges of one sort or another, and only about 15 per cent purely speculative. It is argued that 1914 was a poor test, because speculation was at a low ebb and the test therefore unfair. It may be admitted that there was not any active speculation during the summer of 1914 outside of the large firm which failed. It is fortunate for the cotton trade that the volume of commitments that summer was small; but it is unfortunate that a similar test could not have been made at a time of great speculative activity. The results of such a test would have been interesting and final. The nearest we have to such an analysis is an unofficial investigation made by Mr. Arthur Marsh of the New York Cotton Exchange during the winter of 1909-1910, a time when speculative activity was very great. Mr. Marsh obtained an estimate from most of the leading firms of the Exchange of the character of their outstanding accounts, from a compilation of which he deduced the result that 25 per cent of the transactions in the market were speculative, and the balance trade hedges.[2] In the light of the evidence in 1914, it is probable Mr. Marsh was not far from the truth.

Speculation in Spots.—As to the amount of speculation in spot cotton at any one time, that is a matter much more difficult to ascertain. In fact, it may be set down as impossible to ascertain with any degree of accuracy. The transactions in futures are concentrated upon the three exchanges, and they can be analyzed with comparative ease. The transactions in spots are scattered through every village in the South, and through every mill in this country and abroad. The volume of speculative dealings in spots is certainly not less than the percentages given for futures after examination; it is probably a great deal higher. The statements of producers' associations as to the amount of cotton "held" for higher prices is alone enough to convince the investigator of the volume of spot cotton held speculatively. The mill associations are not as frank, but no doubt the volume of unprotected goods sales is large enough to warrant attention. Moreover, we have not begun to consider the amount of cotton carried unhedged by country merchants, by the shipping firms of the South, nor have we at all considered the amount sold forward and not hedged.

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[2] Testimony of Mr. Marsh and Mr. Neville, Vol. III, Proceedings before the Committee on Agriculture, House of Representatives, 61st Congress, 2nd Session.

Both Sections to Be Considered.—Enough has been said to indicate that we must consider speculation in connection with the cotton market as a whole, and not with any single section of that market. There is speculation in both spots and futures. We must not allow ourselves to be so fascinated by the concentrated excitement and noise of the market on the Exchange that we overlook the far larger market outside its walls.

CHAPTER XXXVI

SPECULATION AND THE INDIVIDUAL

Remarks.—In this chapter we shall treat of speculation from the standpoint of the individual trader. At the outset we should state that this is not written with the idea of inviting any one to speculate in the cotton market, nor with the idea of providing a guide to success in such speculation. As to the first, human nature being what it is, there are but few who possess the desire or ability to undergo the discipline and toil essential to success in speculation. Consequently, the only sound advice is to say, "Do not speculate; leave the market to those whose business it is." As to the second, it has been said that "speculation is a fine art," and one does not lay down hard and fast rules for success in the fine arts. All that can be done is to lay down a few broad principles, and call attention to a few common faults.

Short Selling.—There is nothing wrong or immoral about short selling, which has always existed in the markets, and always will exist. The individual speculator must make up his mind to meet the fact, and waste no time in arguing that it should not be permitted. Cotton both advances and declines and can be both bought and sold.

Psychological Effect of Short Selling.—The man who sells cotton short is never certain of his position, a curious mental twist which deserves the attention of the speculator. If a man buy 100 bales of cotton at 20 cents per pound, that cotton, if taken up and paid for, would cost him $10,000. That sum is the total amount he can lose on his 100 bales, provided the value of cotton entirely disappears.

If he sell 100 bales of cotton short at 20 cents, there is no limit to the loss he may incur, because there is no limit to which the price may not advance. This may appear a far-fetched comparison, but we need turn only to the season of 1920 to realize that it has been warranted by facts. If a man had sold July cotton short that year at 20 cents he might have had to pay over 43 cents to get his cotton back; in other words, he would have had a loss of over three cents a pound more than the possible loss on the long side. The result of this nervous feeling is that the short interest will always "run" quickly. A piece of news, that stirs a long interest not at all, would on the other side have frightened a short interest to cover. This is one of the reasons that professional traders assert that nothing serves as a better support to prices than a healthy short interest outstanding in the market. Likewise, after a prolonged decline the short interest in the market will be much smaller than the long interest after an equally prolonged advance. You can easily excite a man to buy 40-cent cotton, but you have some little difficulty in persuading him to sell 8-cent cotton. These are underlying market fundamentals which the speculator needs to remember.

Inside Information.—There exists in the cotton market no such thing as a good "tip" and no such thing as "inside information." When all is said and done, prices move according to supply and demand. Sometimes the momentary demand may prove to be merely excited speculative buying and not a real demand from consumers; sometimes the selling may be mere liquidation and not the actual pressure of cotton. In either case the force in the market is purely temporary and not to be seriously considered as a reason for a permanent change in prices. It is quite possible it is the symptom of such a change, that the increase in the demand is back of the buying, or that the pressure of a larger supply is back of the liquidation. It is always the supply of cotton and the demand for cotton which are the real fundamentals in the market. Any speculator who allows his attention to be distracted by momentary excitement is apt to miss the important truth behind the market. Now as to the facts of supply and demand, they are open to all who can read and think. The supply of cotton "actual" is posted daily on the blackboards of all cotton Exchanges, is summarized in the weekly figures issued in both New York and New Orleans, is commented upon in all sorts of market letters and articles. The supply of cotton "prospective" is canvassed from January 1 to December 31 with a publicity unequalled in any other trade. Not only are there numerous private reports and estimates constantly being issued, but the Department of Agriculture issues monthly condition reports and crop estimates, and finally the Census Bureau publishes every fortnight the actual number of bales ginned for the season to date. On the demand side we have monthly reports from the Census Bureau showing the domestic consumption and the exports, as well as stocks in mill hands and in public warehouses; besides which the Exchanges publish weekly the so-called "spinners' takings." Moreover, there are numerous trade reports as to domestic yarns and goods sales, and there are the British Board of Trade returns showing the actual business done by Manchester.

When one contemplates this vast array of statistics and facts, the myth of "inside information" as regards actual cotton conditions disappears before the sunlight of public knowledge. There remains the possibility that information may be given either as to the extent of some purely speculative interest in the market, or as to the probability of some large orders affecting the immediate course of prices. In the first place, supposing such information be truthful, of what importance is it? The speculator cannot hope to get his order executed in time so that he can sell out to the large buyer of whose business he has been informed. Moreover, his attention is distracted from the underlying fundamentals to something purely temporary and unimportant. In the second place, such "information" is either the result of accident, or of a dishonorable breach of confidence. In either case it is bound to be inaccurate and misleading.

Market Telegrams.—Messages containing information about the market, or even advice as to the probable course of prices, are of value when such telegrams contain reasons for the thought advanced. The ideas may prove erroneous and the advice poor, or the thought may prove sound and the suggestion excellent. It matters not which, so long as the message contains information upon which the speculator may ponder to the advantage of clear thinking in reference to market problems. He should, however, beware of the telegram which contains the sure "tip," based upon nothing at all but the enthusiasm of the sender. The thoughtful speculator pays no attention whatever to such messages, setting them down either as worthless, or as based upon self-interest and therefore treacherous as well as worthless.

Individual Thinking.—In fact, the speculator must do his own thinking, and must not attempt to "ride" some one else to success. The most foolish mistake that can be made in speculation is to buy or sell cotton because "Jones" is said to be buying or selling, or because "Smith" said the market was going up or down. The resultant loss is disagreeable, but losses the speculator must expect and learn to accept philosophically. The real damage lies in the fact that he has weakened his mind by allowing his thoughts to dwell upon such piffle instead of upon facts. Do your own thinking is a fine rule in speculation. Then you profit by your own mistakes.

Financing Speculation.—As the speculator stands upon his own feet mentally, so let him stand upon his own feet financially. The wise speculator neither asks nor accepts "credit" from his broker. He margins his trades ahead of the market and he invites margin calls. Nothing gives a man to think so furiously as a request for more money, and nothing is so insidiously dangerous as the permission to be "carried" by the broker up to a certain amount. The one is a reminder that the speculator must be alive to his risk and must be alert to think out the meaning of market movements; the other is permission to sleep while the market goes on and leaves him behind.

Overenthusiasm.—The speculator must never get so excited about his side of the market, so confident of his position, that he can see no good in the other man's point of view. Intolerance may or may not be a national sin, but it is one of the deadly sins in speculation. There are always two sides to every market, and the wise speculator is much more concerned to see all the arguments that can be brought against his views than he is to bolster up his decision by constant reiteration of the wonderful possibilities on his side of the market.

Overtrading.—This is another form of over-enthusiasm, a form quite common, more particularly in active markets with advancing prices. If indulged in long enough it will result in the speculator falling into one of the innumerable reactions sprinkled along the path of every market, and staying there, while prices move on to the ultimate goal he had been predicting. If you will look at the so-called "chart" of any market movement you will see that prices moved not in a straight line to the goal, but upward and downward in a series of confusing zigzags. It is as a reminder of the dangers of these cross currents that the chart is chiefly valuable. Never overtrade, or you will find yourself in the ridiculous position of losing your money and your position in a purely temporary "reaction."

Overstaying.—Every market has a "top" and every market has a "bottom," and it is a speculative truism enunciated glibly by all and followed by but few, that "no man ever sold out at the top, or covered in at the bottom." No rule can be laid down as to when the top is reached or when the bottom is in sight, although it is sometimes cynically remarked that as soon as the "cotton market gets on the front page of the newspapers the advance is over." All that can be said is that common sense and some degree of moderation are essential. A merchant or manufacturer considers himself very fortunate with a return of 20 per cent on his investment for a year's business; the same man turned speculator wants a 100 per cent return in short order, or feels himself aggrieved. The market has a saying which covers the point: "A bull sometimes makes money; a bear sometimes makes money; but a hog never makes money."

Late Trading.—Another fatal error is to get convinced by the force of the market itself, and finally rush in to either buy or sell, because "there is no telling how far it will go." That may be very true, but the speculator who lacked the ability to foresee the movement until it has gone so far that its momentum appears irresistible, is the last person capable of judging the end of the movement. Never be an "eleventh-hour" bull or bear. The market is always with you, and if you missed this movement, wait until the next. One of the most difficult things to learn in the market is patience, and yet it is an essential in speculation.

Obstinacy.—Another fault akin to overenthusiasm is obstinacy, and it is an insidious fault because it approaches one under the mantle of one of the virtues, namely, courage. Let us look at the man long cotton at 20 cents, because he believed the supply would force a still higher price. The market hesitates, then starts downward. The decline continues, it becomes slowly evident the supply is larger than predicted and that the demand is poor. But our friend says, "I have the money to see my cotton through, I know I am right, and all I have to do is to sit still and I will come out. It is the market that is wrong, not myself." He has no conception of what he has undertaken. Every time he sees a quotation he is reminded of his troubles; every time he meets a cotton man he is regaled with stories of how low cotton will go. Finally, in sheer desire for peace, he sells out and takes a loss beside which his original debit appears almost a profit. A very wise merchant once said: "If you are in the market and it move against you the first day, sit still: if it move the second day, still keep quiet, but study carefully the reasons for this movement; if it move violently against you the third day, get out at once. You may be right, and it may be a temporary reaction, but the chances are all that you have made some vital mistake in your calculations."

Reverse Position.—A speculator should never reverse his position at a loss. He has made a mistake in buying cotton, he has lost his money, he is tired and sore and mentally incapable of straight thinking. Therefore he should not sell out and at the same time go short. The chances are eight out of ten he will sell into the inevitable reaction, lose more money and more courage. The trade calls that experience being "whipsawed," and it is not a pleasant feeling.

Constant Shifting.—A speculator should cultivate the habit of being calm, of being patient. It is fatal to take a position in the market at the opening, decide at eleven o'clock that your ideas are wrong, make a fresh start, decide again at twelve that this is wrong, begin once more, and so on until the close. No trader can succeed at that sort of thing because none of his buying or selling is based upon fact. It is all guess work or hearsay, or rumor, or just plain folly. The speculator is not a scalper and must not act as though he were. He must make up his mind after thought and change his views after more thought.

Positive Trading.—So far we have given a partial list of the errors in speculation. We must now turn our attention to some of the positive qualities needed by the speculator.

Courage.—It is said that most men possess physical courage; it is fairly certain that only a few men possess moral courage. Yet this is a most necessary quality in speculation. The old saying has it that, "the market is always right," meaning that the price established in open trading defies the contrary opinion. But the market may be very right and the mob very wrong, and it requires moral courage to stand against the mob. A speculator must often stand alone, or almost alone in his views, more particularly after a long continued movement in values. When every one is loudly enthusiastic on one side, when excitement is intense, when nothing can be seen to stop the market, then it is that real courage is needed to disagree with the crowd. Yet, unless the speculator possess that courage, unless he be willing to forego popularity, unless he be immune to pressure, he may miss golden opportunities.

Honesty.—Another quality essential in speculation is honesty, not moral honesty alone, but intellectual honesty. The speculator must not deceive himself either as to his own ability, his own financial strength, or his own position. He must not say, I am capable beyond other men in reading the market, therefore I alone am correct. He must combine with his courage that intellectual honesty which can teach any man his own limitations. He must not say to himself that he has the means to carry such and such a line of cotton when he knows that this is not the truth and that a substantial reaction in the market will bring him face to face with ruin. It is useless for him to maintain that this is the one time such a market movement will not take place. If he is thus deceiving himself, he is intellectually dishonest, and he will be promptly punished by having that very change in prices occur. Finally, and above all, he must not coax himself into the belief that he has not really lost money. It seems impossible that a man should be able to do this with the facts as shown by the market quotations staring him in the face. Yet it is done every day. Men will see that the market has declined, that they have lost a cent a pound on their 100 May, will sell 100 July "against" the May and calmly tell you that they are "hedged" and will "work out all right." It is not the truth; they made a mistake, did not have the honesty to admit it, and will lose their money twice over before they escape from such a false predicament. Honesty, complete honesty with himself, is the speculator's only policy.

Unselfishness.—It will seem like a complete paradox to say that the speculator must be unselfish. Yet this paradox is curiously close to the truth, and is one reason why there are few really successful speculators. He is paid for his services in distributing the cotton crop. He needs a keen sense of responsibility in this connection, a strong feeling of the rights of others. If he allows a selfish adherence to his own market views, or plain greed, to carry him so far that his operations either impede the flow of cotton to the consumer, or force the price to the producer unjustifiably low, then his selfishness will sooner or later react on himself, and his loss will be commensurate with the harm he has done. No one can lay down hard and fast rules and say, here is the line, above this level it is an outrage on the public to force the value of cotton, or below this figure it is a cruelty to the farmer to reduce the price of his crop. Conditions vary so much from year to year that fixed rules are impossible. Yet there is a deadline each way, and the history of speculation is filled with chronicles of those operators who went to ruin because they presumed to cross that line and to carry on their operations until a large section of the country suffered.

Judgment.—Finally, and above all, because it can teach him all, the speculator must have judgment. That quality is so elusive that it cannot be defined, but every one will instinctively recognize what is meant. Some men are born with judgment and they go far. Some men never seem able to acquire judgment and the shores are strewn with their wreckage. Some men acquire judgment by long and painful experience and much hard work and deep thought. Those men are pointed to as the "commercial genius" of the day. It is said that genius is the capacity for taking infinite pains. Commercial genius is the capacity for hard work, thought, the ability to benefit by past experience, intellectual honesty, and judgment. Perhaps we might say that the last word sums up all the rest. Before the individual embarks upon speculation he would do well to ask himself whether he can in time attain these qualities, and whether he is willing to make the effort needed to attain them. Let him be honest with himself, let him disabuse his mind of the notion that speculation means "easy money," and then let him decide whether he had best undertake a share in the proper distribution of the cotton crop.

Speculation in Spot Cotton.—Our remarks have been intended to apply to all speculation in cotton, futures and spots alike. There are, however, a few special cautions necessary for speculating in spot cotton. These are the more necessary that the speculation in spot cotton is greater on the whole than the speculation in futures.

Intellectual Honesty.—In the first place, the spot speculator must be particularly careful to be honest with himself about his transactions. Let him beware of the fascination of the bale. Many a man has been ruined by the thought that because he could actually walk out into his warehouse and touch the bales he was a merchant and not a speculator. The strength of this delusion is remarkable and extends to all classes of people. Because they can touch the cotton they feel themselves elevated on a sort of platform of virtue supported by the bales which they own, and from which no one should be permitted to dislodge them. When the fatal awakening comes and the platform falls, the last person they blame is themselves.

The Farmer.—The farmer grows cotton to sell. It is true he hopes to sell at a profit, and it is equally true that he must sell at a profit over a term of years, or he cannot continue to grow cotton. It is equally true that he has a perfect right to refuse the first price offered after he has brought this cotton to town. There are seasons when he owes it to himself to refuse that price and to endeavor to secure a higher figure. There is nothing inherently wrong in his refusing any price. But let him admit the fact. When he does refuse a bid and does "hold" his cotton he is long of the market, he is speculating. No amount of assertion or argument will alter the fact, and he would do far better with his market operations if he were willing to admit it. This is no plea for immediate sale under any conditions; this is no attempt to persuade the farmer not to hold. This is merely a plain statement of fact in the hope that when he does recognize the market risk he has assumed, he will do better with his market trading than he has done in the past.

The Spinner.—Exactly the same truth applies to the spinner. If he sells goods ahead and does not cover his cotton; if he sells goods and does not "call" the futures; then he is speculating, he is "short" the cotton. No amount of argument will alter the fact. Yet how many spinners are willing to admit the fact? How many will tell you that they are "assuming a merchandise risk"? How many believe that they should somehow be immune from the common lot of the speculator and always guaranteed a profit? Once again this is no argument against the spinner selling before he buys. The exigencies of trade may compel him to do so, to assume the market risk, just as the exigencies of trade have forced the farmer to go long. But the spinner, like the farmer, would do far better with his market trading if he were honest and admitted the fact. Then he would be aware of his risks and keen to judge of market conditions.

Merchants.—We need spend little time on the merchant and his speculative risks in spot cotton. There never was a merchant who was not forced to take a speculative risk at some time. Merchants, however, are so accustomed to the fact that they seldom deny it. They are fully aware of their speculation and keenly alive to market conditions.

Overstaying.—Due in large measure to lack of intellectual honesty, to the failure to recognize the market risk, the greatest curse in spot speculation is overstaying the market. The farmer will shrewdly estimate the market situation, will hold a portion of his crop for higher price, and will then allow himself to be so carried away with the prospect of famine prices that he will wait while foreign cotton takes his market away, or while trade declines, until there is a collapse in the cotton market. His profit is very largely wiped out. In some years he has an actual loss, and then we hear tiresome tales of "conspiracies" to excuse his own blundering. The spinner will sell goods, will see the price of cotton decline, will not cover, and then, when the market does turn, will be scrambling for cotton at a sweet loss and loudly asserting the speculator has ruined him. He forgets that he is a losing speculator himself, unwilling to take his medicine, and unwilling to honestly own up it was his own fault.

The truth is, both farmer and spinner at such times tried to overreach themselves. Neither recognized the other man at all; neither recognized the rights of the community, and neither succeeded.

Summary.—Speculation is a method of assisting the distribution of both supply and demand, so that they will meet the more constantly and easily for the benefit of the whole community. It is easy to forget this fact in the fierce glare of our own little selfish interest. It is much simpler to look at speculation solely from our own standpoint. But, so surely as the speculator persists in thus thinking, so surely will he get into serious difficulties, whether he be farmer, merchant, trader, or spinner. He must grasp the fact that the underlying reason for all market activity is the fair and equitable distribution of the cotton crop. He can only succeed, he can only gain a competence at his chosen profession, because he does recognize the rights of the community, and because he has prepared himself by hard work, bitter experience and constant thought, to so conduct his operations as to facilitate the distribution of the cotton crop.

CHAPTER XXXVII

SPECULATION AND THE COMMUNITY

Speculation and the Community.—It is difficult to look at speculation from the standpoint of the community. We all know the individual personally; we like him; we are aware of his immediate difficulties; we are sensitive to his complaint that these difficulties constitute an injustice; we are eager to have this injustice corrected out of hand. The community is not known to us; we do not feel sympathy with that mass of humanity which we call society; we are indifferent to the results of our attempts to correct individual injustice. Suddenly we ascertain that the community includes ourselves, we cannot understand why there is trouble from the new laws or regulations; we do not appreciate that apparent injustice to the individual may accompany substantial justice to all. In the court room justice is painted as a blindfold figure. It is not different in the market place, for the equitable distribution of commodities is carried on blindly, and when the bandage is removed and an attempt made to balance the scales by sight, the results are not always happy. The open market does great injustice to individuals at times, but in the long run the scales are balanced the more easily that the eyes are blindfold and the troubles of the individual do not distract the vision.

Speculation is a means of aiding the distribution of any commodity, in our case, cotton. It is ''the agent for equalizing supply and demand and rendering the fluctuations of price less sudden and abrupt than they would otherwise be.'' But speculators are human beings, and speculation, the result of human endeavor, is blind and contains the possibility of evil.

Incompetent Speculation.—Large sums of money are lost in the cotton market by incompetent speculators, and these losses are an economic evil for the community. Men cannot dissipate their savings in idle and incompetent speculation without detriment to society. New enterprises, improvements and extensions of old enterprises, the public service, all need to be financed; and the money for this financing must come from the savings of the community. Society suffers when the savings are lost and are not available for investment. There is no escape from the fact, and yet there may be reasons why the evil is essential. The income tax is drawn from savings, and the income tax, when the money is wasted by government—and all governments are wasteful—is an evil for the community, an evil of the same general character as incompetent speculation. Yet the income tax can be defended on the ground that it is the fair method of distributing the burden of taxation, which all must bear if orderly government is to continue. Speculation is an evil when the savings of the community are foolishly dissipated, but speculation can be defended as a fair method of distributing the losses incident to the marketing of any commodity. It is better to endure the loss and injustice to the individual than it is to interrupt the ordinary course of the markets with results no one can predict.

Speculation at High Prices.—It is claimed that the operations of the speculator, regardless of the rights of others, indifferent to the sufferings of the community, intensify the evil of short supply and high prices by driving the market higher and still higher. A very good case can be made out along these lines by carefully selecting the particular era on which to base the argument. There is no doubt that evil does thus arise from speculation, and that for the moment some crisis may be intensified. We may later come to believe that the compensations outweigh even this evil.

Speculation at Low Prices.—If you will carefully select the correct season you can go far to prove that reckless short selling and reckless speculative predictions have done much to intensify some crisis of oversupply and low prices. You will have a bit more trouble establishing your case, because, as we have seen, the fact is that speculation is seldom very active at low prices. Still, let us waive that point, let us admit the evil does exist, we may later come to believe that here also there are compensations.

Regulation.—High prices press upon a large section of the community and cause much indignation; low prices press upon the farmer severely and cause equal indignation. Moreover, the consumer feels he should obtain his goods at a lower price; the farmer feels he should receive more for his product. Both attack the merchant or distributor and assert that he gets more than his share. This position is not always easy to maintain, so both consumer and producer then attack speculation as the evil which wrecks their hopes. This it is easy to do, because injustice is sometimes apparent, and the evils of speculation are also apparent, while the advantages must be found after a careful examination of the whole question. We have many propositions for the correction of abuses in marketing and most of these proposals simmer down to some sort of scheme to check speculation.

Government Control.—The most drastic of all these suggestions has been the idea that the Government through some department or bureau should manage the distribution, eliminating all waste of both merchant and speculator, giving the farmer a full price for his crop and selling that crop to the consumer at a low figure. This Utopian idea was rather rudely shattered during the War. It is fortunate for the present generation that we have ample experience of "Governmental control" and "Government administration" of this and that during the war years. Loss was inevitable in those troublesome times and the lesson probably cost less than it would in a more normal situation. There is nothing new in the thought that the government should manage the distribution and fix the price of essentials. The scheme was tried out unsuccessfully in the time of the Romans; some historians have maintained that the government mismanagement of the grain trade was one of the primary causes of the collapse of the Roman empire. Certainly no one will maintain that Government control worked satisfactorily in any country in any commodity during the War. This is not to criticize the managers of these government bureaus; they had an impossible task, and they probably did as well as any mere men could do. It is like the merchant who was asked what he thought of the appointment of a certain man as "administrator." He replied, "As a man I consider him earnest, unselfish, sincere, hard-working and intelligent, a most excellent appointment; as a substitute for the Almighty, I fear he is doomed to be a sad disappointment."

Suggested Curtailment of Speculation.—Most authorities have agreed that management of marketing by the government alone is unworkable. They next turn to the thought that if only speculation can be curbed, the rest of the market can be trusted to operate with justice. Here again the first idea is to abolish speculation entirely. This, it is thought, can be done by closing the organized Exchanges. The larger speculation in spots escapes attention entirely; it is the speculation in futures which is to be ended. In every second generation this proposal is urged with vehemence, and the cotton exchanges were within an ace of being closed in the nineties and again in the first decade of this century. The troubles of 1914 cast a brilliant light upon the attempt to market a large crop of cotton without the machinery of the exchanges so that in recent years the proposition to close down future trading entirely is not so popular. However, it will no doubt reappear in force at some later date.

Regulation.—The next thought is that without destroying the future market, now realized to be essential, speculation can be curbed by regulation of those markets so that it is no longer an evil. The proposals brought forward are usually tinged with bias one way or the other; that is, the producer desires regulation which will prevent the price of his product from declining; the consumer wishes such regulation as will prevent the price of his raw material from rising to high levels. Both unite in casting the blame for all their difficulties upon speculation; both are perfectly sincere in the belief that their proposal is eminently fair and just to all. We need not go into detail with all the various schemes brought forward to regulate speculation; to do so would be to fill a volume.

Difficulty of Regulation.—There is one fundamental error in all the regulations proposed, and that is, they are unworkable unless they are prohibitory, and in the second case they are unenforceable. You can, of course, practically stop trading in futures on an exchange, no account being taken of the legal aspect of the matter. When you have done so, you have vastly increased speculation by preventing hedging and forcing all merchants to speculate constantly. Moreover, you have also fostered illicit and illegal trading behind the back of the authorities. Every one can cite an instance of that sort of trouble in war times. If you set out to stop speculation at a certain price because that is high enough, then that becomes the minimum not the maximum, and frightened individuals are buying all they can acquire under cover of darkness. If you set a minimum price, that becomes the maximum, the holder of your commodity frightened sadly lest he never can sell, is offering in every direction under your price. If you try to place a limit upon an individual's trading, you soon discover that you have checked the transactions of large merchants who fear the consequences of evasion of law, and not at all checked the thoughtless speculator who is doing his business in half a dozen names.

Results of Regulation.—In short, the market is so many sided, there is so much to be considered, the machinery is so delicate, that it is best left alone. Incompetent tinkering results in disaster; any tinkering, unless done with the utmost care, often results in the most extraordinary and unexpected difficulties, and frequently causes the very evils at which it is aimed. The suppression of the Gold Board in 1864 to reduce the premium on gold is the classic example of this sort of boomerang action.

Duty of the Trade.—The fact that it is almost impossible to regulate these matters by inelastic laws or governmental interference imposes a serious duty upon the cotton trade itself. They must endeavor to hold down incompetent speculation and to prevent excessive trading in either direction. They know the actual facts, they know the best means of accomplishing the desired effect, and they are not likely to carry regulation to the point where the community is harmed by interference with marketing.

Exchanges.—It is the duty of the exchanges to strictly enforce their own rules which are sufficient to check much of the abuse. The exchange authorities have been awakened to the necessity of controlling their members and, in the past twenty years, they have strengthened many of their rules and have adopted new regulations, such as the rule in New York prohibiting the giving of "credit" to any one not engaged in the cotton business. The exchanges are much more active in attempting to enforce their rules than is generally appreciated. They are averse to scandal, if it is possible to avoid it and get results; but, having served on the Supervisory Committee in New York myself, I can state with first-hand knowledge that more discipline is enforced than the public are aware. It is the duty of the exchange authorities to be most vigilant in these matters; it is the duty of the individual members to pay close attention to the transactions in their own offices and endeavor to check the undesirable trading. A great step forward was the institution of the rigid margin requirements of the clearing house which has compelled close attention to the protection of outside accounts. The incompetent are best held down by the initial cost of trading, or, to put it more correctly, by the requirement of a high original cash margin. The clearing house rules are also directed against excessive speculation at extremes because the amount of margin can be, and is, increased as the market becomes dangerous.

Merchants.—All merchants owe a duty to the trade in compelling their clients to act in a reasonable manner. Errors of judgment will occur, and the clearing house margin requirements are a constant check in the futures market. So far as spots are concerned, the merchant should endeavor to keep down speculation at high prices, and he should also endeavor not to add to the trouble at low prices by making panic-stricken statements. It has been said many times that the southern merchants should not allow farmer customers to carry cotton at very high prices without very large margins. The merchant knows this to be a true caution, but the pressure to violate the rule is very great. It is always alleged that to stick to sound business principles in such matters is to prevent the farmer from "holding" for profitable prices. The true caution is not such a rule at all, but to prevent his overstaying the market after the high prices have been reached.

Bankers.—The banks are charged with the same sort of duty. They can do much to control excessive high-priced speculation, and they can do an equal amount to restore confidence, carry cotton and prevent disastrous loss at low figures. Truth to tell, they do the latter very well, but there have been times when they were carried away in the South with high-priced cotton, and in the North with high-priced goods.

Advantages of Speculation.—Speculation should prevent extreme prices and should "render fluctuations less abrupt and violent." These two objects are actually accomplished by open trading, although it is often difficult to realize the fact, simply because we are so dazed by the immediate detail we do not comprehend the whole picture.

Speculation at High Prices.—The desire to profit by a short supply and high prices will often permit the wide distribution of that supply and will actually prevent the extremes to which the price might be carried. We will say that, in the spring the supply of cotton is fairly normal, and the prospect for the new crop is also fairly normal. Under such conditions the markets are quiescent, with little outside speculation. The summer goes on and the weather is unfavorable, insect damage increases, and it becomes possible the yield will be small. At once you have speculation enter the market and prices begin to advance. That movement is a notice to all users of cotton and cotton goods that there is danger of a small supply. The thoughtful prepare for the emergency by acquiring a reserve stock of cotton and goods. It may be said that these purchases and holding back of these reserves increase the price. This is true, but the parable of the wise and foolish virgins may be recalled. Moreover, you cannot induce people to economize by advice alone. The force of necessity must be felt and the easiest way to make that force appear is the pressure of the rising price. If you have a crop of ten million bales, a reserve supply carried over from the last season of a million bales and a consumption of thirteen million bales, somehow the world must do without two million bales of cotton. There is no escape from the fact; the question is simply what is the least troublesome way to bring about the economy. If you allow no "forestalling," if you say no one shall build up a reserve because that forces the price higher and the weaker cannot in their turn get supplies, then you come to a time when there is no cotton at all. Mills are closed down, unemployment is general, clothing is scarce, actual deprivation is present. The problem is the same as shipwrecked sailors at sea with a limited supply of food and water. Stern necessity compels the enforcement of disagreeable discipline, the food and drink of each individual is reduced to a minimum and held there, the weak suffer more than the strong, but the community as a whole has a better chance to survive. Speculation and advancing prices are often cruelly hard upon the individual, but unless discipline is enforced and the small supply thereby eked out, great suffering and final disaster will overtake all.

Breakdown in Speculation.—At the end of such a movement in the market the excitement is always very great and the trading by the incompetent always increases rapidly. The largest speculative interest is always in spot cotton, but even a 20 per cent speculative interest in the future market is a danger to the individual speculator. The price has been forced to a point where curtailment in the use of cotton has begun, and where all the foreign cotton available is being used in place of the high-priced American crop. The result is, first a flutter in the volatile future market, then a selling movement, then a violent decline, with a subsequent liquidation of speculative spot cotton lasting for months. The individual losses are severe, but the community was spared the actual price which would have closed the mills. It is always said, "the market must reach a level where the mills shut down, the supply is so small this is inevitable." The fact is, in actual experience this never comes to pass because the result of speculation, incompetent speculation if you will, is to afford a safety valve which blows off in time. Instead of great deprivation on the part of the community, general unemployment and widespread suffering, we have severe individual losses and a market which failed to reach its logical conclusion in that the famine price was never attained.

Short Selling.—The collapse may easily go too far, indeed it usually does go too far. Once you start the liquidation of a speculative account there are only two factors will stop the market. The first is the need of the world for cotton which will eventually bring a buying power, and the other is the speculative short interest. Long before the actual collapse has started the speculator of experience is trying to "reach" for the top. He sells cotton short, he is wrong and covers at a loss, his purchases adding to the prevailing excitement; he tries again, he covers again; he tries once more, until finally he does get some cotton out around the high prices. The extent of the decline, the fall in the price, depends very largely upon his success in getting a "line" of short cotton out before the break really commences. Outside of his selling, the demand of the eager incompetent is supplied by the trade alone. That is to say, merchants all over the world are eager to sell futures as a hedge against cotton on hand. They have sold those contracts as a protection against the very break in prices which occurs, and they will not, therefore, cover their sales until they are satisfied they no longer need the protection. They await the revival of the world demand at a more reasonable level of prices, and they are useless as a support to the rapidly falling market. The rapidity of the decline in turn checks the demand for cotton and cotton goods until people can see just where the liquidation will end. The speculative short seller, however, sold his cotton for the express purpose of making a profit on such a decline. He is eager to get that profit in bank, a short is never entirely happy in his position. He is then a buyer all the way down, and if, happily, he has been able to sell enough cotton before the slide began, first his purchases are in volume sufficient to check the market, and later to attract the trade demand, when it is seen that, after all, cotton does have a value. It is customary in all such seasons to represent the short seller as a sort of piratical parasite whose evil doing has caused all the trouble. The thought is a solace to the injured individual, but it has no place in any serious summary of the market situation.

Speculation at Low Prices.—Here the situation is much more simple, since all can see the advantage of attracting buyers to a market clogged with supplies. The crop is large, business is poor, the volume of cotton pressing for sale has weighed down the market for so long a time that all the unthinking are convinced cotton has but little value, and may go to almost any absurd price. It is true that the speculative interest is not so large as at high prices, for the incompetent are not so much attracted to the short side, but there is sufficient cotton sold short to tell very much against the price and to intensify a critical situation. As was the case at the top of the bull market, it is said that nothing can appear to alter the outlook, "cotton must go to a price where there is no doubt it is the cheapest commodity on earth, and then only slowly will it recover." Fortunately for the community, these dire predictions never come to pass. The closest they ever did come to actual fulfillment was in 1914, when the exchanges were closed, and speculation was supposedly extinct. Then we were passionately invited to "buy a bale at ten cents" and the exchanges were asked by resolution to reopen at once. In an ordinary market the process on such a decline is the reverse of that at the top. The experienced speculator begins to ‘‘feel’’ for the bottom, he buys and is wrong and sells out at a loss; he goes in and out the second, possibly the third time, at a loss; finally he gets some cotton and the market goes up. The moment the advance seems at all permanent the mills rush in to acquire cotton at a cheap price against future needs, and the enormous supply about which we have heard so much for so long is no longer a weight upon the market. Curious to relate, the more the speculative buyers acquire before the advance starts the higher the market will go before a reaction. This is the reverse of the situation on the short side, and is due to the fact that the buyer knows the possible extent of his loss and is in doubt as to the possible extent of his profit. He is not eager to sell out; on the contrary, he never contemplates doing so until the market begins to show signs of a reaction.

Speculation an Aid to Distribution.—These examples of the result of active speculation both at high prices and at low prices are examples of the evil speculation will do the individual at the same time that good is resulting to the community. There is a function of speculation which aids both the individual and the community. In the marketing of any commodity there come times when the momentary supply is greater than the demand, or when the momentary demand is greater than the supply. It is the proper function of speculation to tide over such gaps in an orderly manner and without the wide fluctuations in price otherwise to be expected. It was the misfortune of the war years that speculation in cotton was limited to American and was almost entirely lacking in Europe, where the pressure of the War was most keenly felt. The cotton market from 1914 to 1920 sadly lacked the speculative balance wheel. We have remarked before the tendency of American markets to lay the greater stress upon the factor of supply. The fact was well illustrated in 1914-1920. When the markets reopened for trading there was a demand from Germany based upon the idea that they would speedily win the War, when cotton at six or seven cents would be of great value. On the other hand, the demand from the balance of Europe was entirely lacking. Oppressed with the tragedy of the War, or else actually engaged at the front or in other war work, the speculator in England, France, or Italy was in no mood to buy anything. The cotton market hung around the low prices all the winter of 1914-1915, the German demand proving sufficient to prevent any further decline, but the speculator in America still overpowered by the sight of the enormous supply of cotton. Only when the so-called "war-boom" in securities began did the American public discover the potential profit in eight-cent cotton. Once they had discovered that fact, there was no limit to their ideas of price. Of course, one cannot analyze the advance in cotton during the war solely upon the basis of speculative considerations, since the underlying factors were always in favor of the higher price level. What we are attempting is simply to call attention to the fact that speculation being entirely from America was concerned solely with the possibility of higher and still higher levels, and gave no consideration to the other side of the market. The result was, that whenever some sudden incident occurred against the market, or whenever the price overtook and passed the actual trade situation, we had most violent and unexpected declines in price. It is not necessary to go into detail, but we might mention the so-called "Lusitania panic," the so-called "peace panic" in the late fall of 1916, the "submarine panic" on February 1, 1917, the "export panic" in the spring of 1918, and the "armistice panic" in the fall of 1918. Each and every one of those declines was unexpected and terrifically violent, and in each case the lack of a speculative short interest was deplored. This was due to the fact that all the speculation in the market was of American origin, the small amount of English speculative trading following the American lead, with the result that no account was taken of anything but the supply. A balance wheel was never present.

In Normal Times.—The war years are cited as an excellent illustration of the failure of speculation, in common with everything else, to act normally. At the top and at the bottom, with unparalleled violence speculation played its usual rôle of stopping markets short of their ultimate destination. In the matter of the intermediate fluctuations speculation did not do its part in the orderly distribution of the crop. When some unexpected event takes place, it is the speculator rushing in to take advantage of the opportunity who checks the violence of the movement. In case of a sudden access of supply, evidently temporary in nature, it is the speculator who will buy the cotton with the idea of reselling at a profit when the flurry is past. In case of a sudden increase in demand, evidently temporary in nature, it is the speculator who sells short the cotton with the idea he can soon cover at a small profit. Finally, it is the so-called ‘‘scalper’’ who stands in the gap, both in spots and futures, between the buyer and the seller. Orders do not always synchronize either in the southern town or around the future ring, and the speculator is paid for his services in buying what is for sale, or selling what is wanted at the moment. His services are very valuable in this respect, for the knowledge that cotton can be bought or sold instantly without any appreciable sacrifice is the basis upon which the merchant distributes the crop for a small return to himself. If the risk increases, if he cannot instantly ‘‘turn around’’ as the market puts it, if he cannot always find a buyer, or always find a seller, the merchants’ risks are thereby increased, and as they are increased, so must his charges be increased, or he cannot survive.

Summary.—Speculation has its evils, and they are not evils to be lightly cast aside, but speculation plays a most important part in the marketing of cotton. Without speculation, it is difficult to see exactly what might be the cost of getting the bale from the plantation to the mill. It would undoubtedly be far greater than it is to-day and all classes in the community would suffer. Justice Holmes of the United States Supreme Court summed up the whole case in the following opinion[1]:

"As has appeared, the plaintiff's Chamber of Commerce is, in the first place, a great market, where through its eighteen hundred members is transacted a large part of the grain and provision business of the world. Of course, in a modern market contracts are not confined to sales for immediate delivery. People will endeavor to forecast the future and to make agreements according to their prophecy. Speculation of this kind by competent men is the self-adjustment of society to the probable. Its value is well known as a means of avoiding or mitigating catastrophes, equalizing prices, and providing for periods of want. It is true that the success of the strong induces imitation by the weak, and that incompetent persons bring themselves to ruin by undertaking to speculate in their turn. But legislatures and courts generally have recognized that the natural evolutions of a complex society are to be touched only with a very cautious hand, and that such course attempts at a remedy for the waste incident to every social function as a simple prohibition and laws to stop its being are harmful and vain."

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[1] Chicago Board of Trade vs. Christie Grain and Stock Co., 198 U. S. 236.

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